BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Review of the Commission's Rules Regarding	)	
The Pricing of Unbundled Network Elements	)	WC Docket No. 03-173
And the Resale of Service by Incumbent Local	)	
Exchange Carriers	)	

AFFIDAVIT OF

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PREPARED FOR

THE NATIONAL ASSOCIATION OF STATE UTILITY CONSUMER ADVOCATES (NASUCA)

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[1] We gratefully acknowledge the invaluable assistance provided by Steven Burns and Mark Kosmo, Ph.D.

LIST OF ACRONYMS

ADSL	Asymmetric Digital Subscriber Line
BCPM	Benchmark Cost Proxy Model
BOC	Bell Operating Company
CAPM	Capital Asset Pricing Model
CLEC	Competitive Local Exchange Carrier
CMT	Common Line, Marketing, and Transport Interconnection Charge
C-MUX	Customer Multiplexer
CT DPUC	Connecticut Department of Public Utility Control
DEM	Dial Equipment Minutes
DLC	Digital Line or Loop Carrier
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexers
DTE	Department of Telecommunications and Energy
ECPR	Efficient Component Pricing Rule
FCC	Federal Communications Commission
FLEC	Forward-Looking Economic Cost
FTTH	Fiber to the Home Network
GAAP	Generally Accepted Accounting Principles
HFPL	High-Frequency Portion of the Loop
HUNE	High-Frequency Unbundled Network Element
ICC	Illinois Commerce Commission
IDLC	Integrated Digital Loop Carrier
ILEC	Incumbent Local Exchange Carrier
ISDN	Integrated Services Digital Network
ISSLS	International Symposium on Services and Local Access
LEC	Local Exchange Carrier
LRIC	Long Run Incremental Cost
MPSC	Michigan Public Service Commission
NASUCA	National Association of State Utility Consumer Advocates
NECA	National Exchange Carrier Association
NPRM	Notice of Proposed Rule Making
OSS	Operation Support Systems
RAM	Remote-Access Multiplexer
RBOC	Regional Bell Operating Company
SBC	Southwestern Bell Corporation
SNET	Southern New England Telephone
TELRIC	Total Element Long-Run Incremental Cost
TRO	Triennial Review Order
TSLRIC	Total Service Long-Run Incremental Cost
UNE	Unbundled Network Element
USF	Universal Service Fund
VDT	Video Dialtone
WUTC	Washington Utility and Transport Commission
xDSL	Digital Services Line (Symmetric or Asymmetric)

1 Introduction

1. On September 15, 2003, the Federal Communications Commission (FCC) issued a Notice of Proposed Rulemaking (NPRM) in this docket. Comments are due on December 16, 2003. We present this affidavit to support the comments of the National Association of State Utility Consumer Advocates (NASUCA) on the complex issue of forward-looking cost methodologies and their application to UNE pricing.

2. The purpose of this proceeding is to review the Federal Communication Commission's (the Commission) rules regarding the pricing of unbundled network elements (UNEs) and the resale of service by incumbent local exchange carriers (ILECs). Undertaking this review is consistent with the Commission's commitment to periodically review its policies, and with the implementation of the 1996 Local Competition Order.

3. Based on the introduction of the NPRM there are four issues that we shall address in this Affidavit. These issues are:

- The Commission's desire to make TELRIC less hypothetical and more closely based on the existing network (Paragraphs 4 and 7 of the NPRM);
- The argument that the TELRIC methodology leads to unrealistic rates that are below cost due to the methodology's emphasis on unrealistic efficiency assumptions (Paragraph 5 of the NPRM);
- The time and effort the states have to put into TELRIC cases due to the need to evaluate conflicting cost models, expert testimony and evidence, and the argument that this leads to highly variable results (Paragraph 6 of the NPRM); and
- The need to promote efficient facilities-based investment with rates that are reasonable and nondiscriminatory (Paragraphs 2 and 3 of the NPRM).

4. We commend the Commission for undertaking this review which is the first comprehensive review of the rules applicable to the pricing of UNEs, and the Commission's stated objective "…to modify or clarify the Commission's rules in order to help state commissions more easily develop UNE prices and resale discounts … and to provide more certainty and consistency in the results of these state proceedings".[2] We believe that consumers in the United States should benefit from both this review, and the subsequent policies to be adopted and implemented by the Commission.

2 Professional Qualifications

[2] Notice of Proposed Rulemaking in the Review of the Commission's Rules Regarding the Pricing of Unbundled Network Elements and the Resale of Service by Incumbent Local Exchange Carriers -- WC Docket No. 03-173 (NPRM), Paragraph 9.

5. David Gabel. I have been intimately involved in TELRIC cost proceedings in a number of states. Most importantly, I have been the technical advisor to the Public Utility Commissions of Washington, Maine, and New Mexico in their cost dockets and arbitration proceedings.[3] This opportunity has provided me the opportunity to observe the complete record in numerous TELRIC cost proceedings. Furthermore, in part due to my familiarity with the evidence presented in these proceedings, the Commission hired me as an advisor in Universal Service Cost Proceeding.

6. The Commission also retained me because of my research work on the cost structure of the telephone industry. Some of the research is referenced in the Commission's Tenth Report and Order of its Universal Service Proceeding.[4]

7. Since obtaining my PhD in economics from the University of Wisconsin in 1987, I have been a member of the Department of Economics at Queens College. I am also a Visiting Scholar in the Massachusetts Institute of Technology Internet and Telecommunications Convergence Consortium in Cambridge, Massachusetts, and a research fellow of the National Regulatory Research Institute at the Ohio State University. Prior to my job at Queens College, I was employed in both the public and private sectors.

8. I spend a large share of my time exploring issues related to the cost function of the telecommunications industry. I am also an instructor at the National Association of Regulatory Commissioners (NARUC) summer training course held at Michigan State University each year. In addition, I was a co-author of two reports commissioned by the National Regulatory Research Institute on the Commission's Triennial Review Order. The first report developed an overview of the economic issues of impairment under the Telecommunications Act 1996, and the second provided a database and the means for estimating the costs of UNE-L (Unbundled Network Element Loop) supply versus UNE-P (UNE-platform) on a granular basis. The reports have been disseminated to the members of the National Association of Regulatory Utility Commissioners (NARUC – http://www.naruc.org).

9. Robert Loube. I was employed as industry economist by the Commission from 1996 to 2001. During that time, I was part of the team that developed the Synthesis Model and determined the inputs to that model. I also reviewed and analyzed the Benchmark Cost Proxy Model (BCPM) and HAI models. I ran numerous sensitivity studies of all three models in order to understand how the differences in the model logic and inputs affected model outputs.

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[3] The opinions expressed herein are our views on the NPRM and may or may not be representative of the views of the Commissions that we have advised.

[4] Federal Communications Commission, Tenth Report and Order, In the Matter of Federal-State Joint Board on Universal Service (CC Docket No. 96-45) and Forward-Looking Mechanism for High Cost Support for Non-Rural LECs (CC Docket No. 97-160), November 2, 1999. http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/fcc99304.txt

10. Prior to working for the Commission, I was the econometrician for the Indiana Utility Regulatory Commission and the Director of the Office of Economics for the District of Columbia Public Service Commission. In those positions, I testified on issues associated with the validity of telephone increment cost studies and the impact of incremental cost pricing on competition. I also served on the Separations Federal-State joint board and was a member of several NARUC staff sub-committees on telecommunications working groups.

11. I am now the Director, Economic Research for the Rhoads and Sinon Group, LLC. As a consultant, I have been the technical advisor to the staff of the Alabama Public Service Commission in its recent UNE cost docket, and have filed testimony for the staff of the Nevada Public Utilities Commission regarding the TELRIC models of Sprint and SBC.

12. As an instructor at the NARUC Annual Regulatory Studies Program, I have lectured on cost modeling in telecommunications, universal service and the evolution of telecommunications pricing.

3 The Commission's Proposed Modifications To TELRIC Pricing To Make It Less Hypothetical And More Closely Based On The Real-World Attributes Of The Existing Network Are Misguided (Paragraphs 4 and 7 of the NPRM);

13. Concern has been expressed in the NPRM that TELRIC methodology is hypothetical and not reflective of the costs incurred by ILECs.[5]

14. The Commission properly notes that many of the inputs to the forward-looking cost studies are hypothetical.[6] By their very nature, forward-looking costs are hypothetical. The only way to avoid hypothetical costs is to use embedded costs, but it is well know that this has poor efficiency properties[7] and has never been seen by the ILECs as a reasonable basis for ascertaining the appropriate rates for ILECs' retail services.[8] The

[5] NPRM, Paragraphs 4 and 7.

[6] NPRM, Paragraphs 4 and 7.

[7] NPRM, Paragraph 32.

[8] In some instances, it appears that embedded costs are also hypothetical. For example, the audits of the continuing property records revealed that approximately 11 percent of the reported embedded book central office plant did not exist. In the Matter of Bell Atlantic (South) Telephone Companies' Continuing Property Records Audit, ASD File No. 99-22, FCC 99-33, March 12, 1999; In the Matter of Ameritech Corporation Telephone Operating Companies' Continuing Property Records Audit, ASD File No. 99-22, FCC No. 99-35, March 12, 1999, In the Matter of BellSouth Telecommunications' Continuing Property Records Audit, ASD File No. 99-22, FCC 99-34, March 12, 1999; In the Matter of Southwestern Bell Telephone Company's Continuing Property Records Audit, ASD File No. 99-22, FCC No. 99-29, March 12, 1999.

ILECs have consistently advocated using forward looking economic costs to set price floors for their products.[9] What the Commission did in adopting the TELRIC standard was to say that the ILECs had to rent out their facilities using the same hypothetical approach that the Commission and state regulatory commissions had adopted for the ILECs' competitive services.

15. Before addressing this issue in more detail, it is helpful to provide some historical perspective on the evolution of cost studies.

3.1 The Historical Evidence Suggests That In The Past Two Decades The Commission And The ILECs Have Never Had A Problem With "Hypothetical" Methodologies

16. Prior to the 1996 Telecommunications Act, cost studies were used to judge the reasonableness of retail rates. Cost studies were used to establish price floors for competitive services in order to ascertain whether the rates set under regulation were unduly discriminatory.

17. It is important to point out that the Commission and the Regional Bell Operating Companies (RBOCs) never had a problem in the past with cost studies that were hypothetical, forward-looking, and might have underestimated the cost of providing competitive retail services. During the 1980s and early 1990s, the RBOCs argued that loop studies, for example, should reflect forecasted utilization in the range of 70% (BellSouth) [10] to 85% (NYNEX).[11] The RBOCs supported these values because they wanted to have substantial pricing latitude in markets where they were facing competitive access providers, and the Commission concurred.

18. After passage of the 1996 Act, however, cost studies took on a new role because the Act requires that UNEs be priced at economic costs in order to encourage efficient entry. For entry to be efficient, wholesale rates cannot be set too low because this would discourage facility-based entry, and also hinder the ILECs' ability to raise capital. On the other hand, setting UNE rates too high would impede competition in the retail market and lead to excessive facility-based investment.

Auditing outside plant investments would be especially problematic. Unlike with central office equipment, much of the investment is underground and therefore not visible. While some of the cables terminate in the cable vault, a substantial amount of investment could not easily be validated through a field audit (e.g., buried distribution cables).

[9] See Paragraph 63 *infra*.

[10] James L. Johnson and Peter F. Martin, Managers, BellSouth Services, Pricing and Economics. "A Practical Model for Estimating the Incremental Cost of Local Exchange Loops" in Marginal Cost Techniques for Telephone Services: NRRI Symposium Proceedings, January 1991, Page 84.

[11] New England Telephone Marginal Cost Study, Maine Docket 92-130, Part 3, Tab A, Section IV, Table 2.1 and 2.2), 1992.

19. State commissions, much more so than the Commission, were accustomed to analyzing and ruling on cost studies at the time the 1996 Act was passed. Many state commissions had completed cost dockets for retail services. These proceedings generally established total service long-run incremental cost (TSLRIC) as the pricing standard for retail services. Being a forward-looking, rather than embedded, cost standard, the benchmark used to judge the reasonableness of rates was thus hypothetical costs. The ILECs were the primary proponent of using TSLRIC as the cost standard for judging the reasonableness of rates.

20. Concurrently, the Commission did not undertake an exhaustive analysis of what was the appropriate costing standard for services. Prior to the passage of the Act, the Commission effectively concluded that prices should be governed by price caps, and therefore there was little need to undertake detailed cost studies. In fact, the Chair of the Commission, Alfred Sikes, stated in 1990 that he doubted that it was possible to quantify the cost of providing telecommunications services.[12] The Commission, therefore, invested comparatively few resources into developing costing standards and methodologies. The states, on the other hand, had a rich history of detailed cost investigations since these were required in order for them to fulfill their regulatory mandates.[13]

21. Pre-Act cost dockets in the states established a plethora of institutional knowledge that influenced the resolution of post-Act costing disputes. For example, the precedents established in pre-Act cost proceedings established cost floors that influenced the perception of how networks should be modeled and as to the proper input values for a TELRIC case.

3.2 Forward-Looking Cost Methodologies Should Form The Basis For The Commission's Decision Regarding Its Rules Governing The Pricing Of Unbundled Network Elements By Incumbent Local Exchange Carriers

[12] New York Times, 20 September 1990, Page D2.

[13] See, for example, Public Service Commission of the District of Columbia, Formal Case No. 814, Phase III, In the Matter of Investigation of the Impact of the AT&T Divestiture and Decisions of the Federal Communications Commission on the Chesapeake and Potomac Telephone Company's Jurisdictional Rates, Opinion and Order, Order No. 10147, January 15, 1993; Public Service Commission of the District of Columbia, Formal Case No. 814, Phase II, In the Matter of Investigation of the Impact of the AT&T Divestiture and Decisions of the Federal Communications Commission on the Chesapeake and Potomac Telephone Company's Jurisdictional Rates, Opinion and Order, Order No. 9856, October 10, 1991.

Maine Public Utilities Commission, Public Utilities Commission Order Re: Investigation into New England Telephone Company's Cost of Service and Rate Design, Docket No. 92-130, April 13, 1994.

Washington Utilities and Transportation Commission, *U S WEST Communications Inc.*, Docket No. 941464, Fourth Supplemental Order, October 23, 1995.

22. We agree with the two objectives of UNE pricing identified by the Commission in the NPRM and the Local Competition Order, and that these should remain as priority objectives:

> First, UNE prices should be set in a manner that sends efficient entry and investment signals to all competitors. Second, UNE prices should provide incumbent LECs an opportunity to recover the forward-looking costs of providing UNEs.[14]

23. We also agree with the Commission that rates should continue to be based on Forward-Looking Economic Cost (FLEC) methodology rather than historical costs, the Efficient Component Pricing Rule (ECPR), or Ramsey pricing. We agree with the reasons identified in the NPRM by the Commission – namely that historical costs are not relevant for setting prices in competitive markets, the ECPR is inappropriate because it relies on prevailing retail prices which are not cost-based and might reflect monopoly rents, and Ramsey pricing would discourage competition by raising prices for the most critical bottleneck elements.[15]

24. The Commission has reaffirmed its commitment to using of using a forward-looking cost methodology for UNEs in the NPRM:

> Although some incumbent LECs continue to press for UNE rates based on an historical cost methodology, in this proceeding we reaffirm our commitment to forward-looking costing principles. As the Supreme Court has made clear, an approach based on forward-looking cost is an entirely reasonable approach to follow under section 252(d)(1).[16]

25. As pointed out in Paragraph 60 of the NPRM, relying more closely on the existing network of the ILEC for determining costs would provide an asymmetric advantage to the ILEC over its competitors in any rate proceedings. However, such an approach would also be inappropriate from a technical standpoint. It would be inappropriate to use embedded cost data to establish the cost of the loop by zone. This is because the accounting records of the ILECs do not have the necessary level of detail for making pricing decisions regarding the provision of UNEs and pricing interconnection, and their accounting methodologies are primarily used for tracking their financial performance.[17]

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[14] NPRM, Paragraph 38.

[15] NPRM, Paragraphs 32-37.

[16] NPRM, Paragraph 2.

[17] David Gabel and David Rosenbaum. "Who's Taking Whom: Some Comments and Evidence on the Constitutionality of TELRIC" in Federal Communications law Journal, February 2000, Volume 52, Page 255.

3.3 How Should Inputs To A Cost Model Be Determined?

26. We agree with the Commission regarding the importance of using a forward-looking cost methodology for the pricing of UNEs. However, we disagree with the Commission regarding its assessment of how the concept of TELRIC was implemented by the states. According to the Commission, TELRIC methodology does not yield consistent results in its application across different states:

> Part of the difficulty that states and interested parties have encountered springs from the excessively hypothetical nature of the TELRIC inquiry. Because of the general nature of our rules, state commissions have wide latitude in applying the `most efficient technology' standard under the current rules. This creates the potential for a TELRIC proceeding to become a "black box" from which a variety of possible rates may emerge.[18]

27. A TELRIC proceeding could be a black box because theoretical models provide little guidance concerning quantitative values.[19] For example, economic theory tells us that a demand curve should be downward sloping with respect to prices. However, it does not tell us if the demand should be elastic or inelastic. The key to understanding how a market is operating is to collect a sufficient amount of data in order to estimate reasonably the elasticity of demand. The data must be collected on a market specific basis because, as the Commission's Triennial Review Order (TRO) recognizes, conditions can vary greatly in different markets (i.e., there is not one market called the United States).[20]

28. Establishing reasonable inputs for a cost model requires collecting tremendous amounts of data on what are the cost conditions in a particular state. This is done in a cost proceeding, during which the states have relied, in part, on the expertise that they had established in reviewing cost studies prior to the passage of the 1996 Telecommunications Act. The states are able to compare inputs from pre-act to post-act cost studies as a check for reasonableness. For example, the Illinois Commerce Commission (ICC) compared the pre-act service lives and utilization rates sponsored by Ameritech with the values the company supported for its TELRIC studies. With regards to utilization rates, the ICC noted that "Ameritech's TELRIC-based rates for certain

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[18] NPRM, Paragraph 7.

[19] What is a black box? "A device or theoretical construct with known or specified performance characteristics but unknown or unspecified constituents and means of operation". http://dictionary.reference.com/search?q=black%20box. So there is nothing inherently wrong about black boxes.

[20] For example, the Commission's rules mandate that the market definition for local circuit switching be done at a finer level of granularity than the State. 51.319(d)(2)(i).

UNEs are nearly double the LRSIC [long-run service incremental cost] it computed over the recent past. A significant portion of this differential results from the proposed fill factor reductions."[21]

29. It was reasonable for the Commission, and other state commissions, to evaluate the reasonableness of the ILEC TELRIC cost studies by comparing the Post-Act cost study inputs with similar pre-Act cost studies. Relying on prior cost studies to judge the reasonableness of study inputs is a standard practice of cost analysts. Indeed, the Commission has suggested that it is sensible to obtain inputs for a new rate element from a study for a service that uses the same facility. In 1997, the Commission noted that:

> …one of the major tools commonly used for cost estimation [is] comparing the costs of the service under investigation to the costs of another service that is comparable in terms of the assets and the tasks required to provide that service.[22]

30. While the Commission's NPRM suggests that the state proceedings are a black box, it has not suggested an alternative approach. What might be the next best alternative to the current process? Should the Commission establish inputs that are specific to each state or study area? The Commission rejected such an approach as infeasible under the USF process.[23] Perhaps the Commission could also collect its own data, but this proved to be of limited value in the USF proceeding.[24]

31. The Commission's Physical Collocation order is a recent example of the Commission simultaneously establishing a range for what it believed to be reasonable cost inputs. In its 1997 Physical Collocation Order, the Commission determined that the reasonableness of an input should be judged by comparing the input value sponsored by an ILEC to the average value for the same input sponsored by all ILECs.[25]

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[21] Illinois Commerce Commission On Its Own Motion, Investigation Into Forward Looking Cost Studies And Rates Of Ameritech Illinois For Interconnection, Network Elements, Transport And Termination Of Traffic; Illinois Bell Telephone Company, Proposed Rates, Terms And Conditions For Unbundled Network Elements, 96-0486 Consolidated 96-0569,*1998 Ill. PUC LEXIS 109*, February 17, 1998, Pages 16, 20.

[22] Federal Communications Commission, Second Report and Order**,** In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, CC Docket No. 93-162, June 13, 1997, Paragraph 142.

[23] Federal Communications Commission, Tenth Report and Order, In the Matter of Federal-State Joint Board on Universal Service (CC Docket No. 96-45) and Forward-Looking Mechanism for High Cost Support for Non-Rural LECs (CC Docket No. 97-160), November 2, 1999, Paragraph 92. http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/fcc99304.txt

[24] Ibid., Paragraph 110.

[25] Federal Communications Commission, Second Report and Order**,** In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for

32. The Commission's methodology included only those companies whose costs lay within one standard deviation of the mean because anything outside of one standard deviation was deemed unacceptably divergent from the average. The Commission never explained why one standard deviation was the appropriate measure. However, even if the use of one standard deviation is conceptually correct, it provides very little operational guidance since regulators would have to determine whether the selected value within the one-standard deviation range is too low or too high. One deviation can establish a large range when discussing the cost incurred by an efficient firm. For example, in the Physical Collocation Order, the Commission's analysis established that $265 and $181 were the average cost and standard deviation of an entrance facility when the LEC installed the cable. This established a range of reasonableness of $265 ✂ 181, or from $84 to $446.

33. Thus, we believe that the methodology employed by the Commission in the Physical Collocation proceeding established a methodology that effectively is inferior to the current process used by the state commissions in applying the current TELRIC cost methodology. The current process is superior because rather than relying on cost estimates that are not subject to discovery or cross examination, as was the case in the Physical Collocation proceeding, the states thoroughly explored the reasonableness of the input values sponsored by the parties.[26]

34. Furthermore, the Physical Collocation Order points out that it is difficult to compare inputs across companies due to the variance in the way in which costs are reported by

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Special Access and Switched Transport, CC Docket No. 93-162, June 13, 1997, Paragraphs 125-130 and 148-149.

[26] Washington State Utilities and Transportation Commission In the Matter of the Pricing Proceeding for Interconnection, Unbundled Network Elements, Transport, and Termination, and Resale, Docket No. UT-960369, Eighth Supplemental Order, April 16, 1998, Paragraphs 452-456.

The Commission's Triennial Review Order (TRO) recognizes the value of the State proceedings in establishing a comprehensive record:

> We find that state regulators are closest to the facts particular to the provisioning issues applicable to their respective markets, and are in the best position to judge whether the incumbent LEC has indeed developed an efficient loop migration process. There can be no doubt that state commissions possess the competence to implement a cost-effective and fast process for provisioning unbundled local loops. State commissions possess the requisite expertise to apply Commission-prescribed standards, and they routinely utilize the processes and procedures – including discovery, sworn testimony, and cross examination on the record – that are essential to reasoned fact-finding.

Federal Communications Commission, Triennial Review, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking in the Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers (Docket Number 01-338), Implementation of the Local Competition Provisions of the Telecommunications Act of 1996 (Docket Number 96-98), and Deployment of Wireline Services Offering Advanced Telecommunications Capability (Docket Number 98-147), August 21, 2003, Paragraph 488.

the different companies.[27] A similar problem was faced by the Commission in the USF proceeding when it tried to compare cost inputs across companies based on survey data. The Commission found company responses to be inconsistent with the definitions used in its survey instrument.[28]

35. It is not an easy process to compare inputs across companies, and therefore the Commission should be mindful that it is stepping into a quagmire which will demand much of its time if it is to establish reasonable inputs. Indeed, the Commission recognized that this would be a problem in the Universal Service proceedings when it noted that verification of company data was virtually impossible:

> While reliance on company-specific data may be appropriate in other contexts, we find that for federal universal service support purposes it would be administratively unmanageable and inappropriate. The incumbent LECs argue that virtually all model inputs should be company- specific and reflect their individual costs, typically by state or by study area. … Selecting different values for each input for each of the fifty states, the District of Columbia, and Puerto Rico, or for each of the 94 non-rural study areas, would increase the Commission's administrative burden significantly. Unless we simply accept the data the companies provide us at face value, we would have to engage in a lengthy process of verifying the reasonableness of each company's data. … Scrutinizing company-specific data to identify such anomalies and to make the appropriate adjustments to the company-proposed input values to ensure that they are reasonable would be exceedingly time consuming and complicated given the number of inputs to the model.[29]

36. As illustrated above, establishing a price range of the mean plus or minus one standard deviation provides little useful guidance to a cost analyst. In order to eliminate the broad range, the Commission could establish an average, but as pointed out in the Physical Collocation Order, this too can be problematic because it is difficult to compare data across firms because of different accounting procedures. The Commission could use accounting data for existing procedures and technology (e.g., the cost of a pole), but not for new products and procedures for which there is no accounting data to rely

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[27] Federal Communications Commission, Second Report and Order**,** In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, CC Docket No. 93-162, June 13, 1997, Paragraphs 128-130.

[28] Federal Communications Commission, Tenth Report and Order, In the Matter of Federal-State Joint Board on Universal Service (CC Docket No. 96-45) and Forward-Looking Mechanism for High Cost Support for Non-Rural LECs (CC Docket No. 97-160), November 2, 1999, Paragraph 110. http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/fcc99304.txt

[29] Ibid., Paragraph 92.

upon. The Commission recognized this in the Collocation Order when it dismissed the usefulness of an average value.[30]

4 The Commission Should Not Accept That TELRIC Methodology Leads To Unrealistic Rates That Are Below Cost Due To The Methodology's Emphasis On Unrealistic Efficiency Assumptions (Paragraphs 4 And 5 Of The NPRM)

37. Paragraph 4 of the NPRM identifies an apparent conflict in the TELRIC methodology. The NPRM states: "Specifically, we propose to simplify TELRIC pricing, while simultaneously improving the accuracy of its pricing signals, by resolving one of the key internal tensions that marks its current application: the assumption that for some purposes rates should reflect a market with widespread facilities-based competition but, for other purposes, rates should reflect a market with a single dominant carrier." The Commissions statement suggests a misunderstanding of how the studies are done. The cost studies are largely based on the actual level of demand that is met by the ILECs.[31] The cost estimates are developed by starting with the quantity of service delivered by the ILEC. Simultaneously, the cost models take into account that the ILEC, while dominant, faces competitors and shares facilities with other utilities. The level of facility based competition built into the models is, however, realistically *not* "widespread".

38. Any other set of assumptions would make no sense. The ILEC is not the sole supplier, and therefore it would be inappropriate to assume that all demand in a market is served by one supplier. If such an assumption was made, the cost study would understate the true economic cost of production because the model would assume economies of scale that are not achieved.

39. We recommend that the Commission review the decisions of the Washington Utilities and Transportation Commission (WUTC) in order to understand how regulators take into account the growing market share of the CLECs and the continuing dominance of the ILECs. In its generic cost docket, the WUTC explicitly increased the loop cost estimates to reflect that unit costs would increase due to the growth of competition.[32]

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[30] Federal Communications Commission, Second Report and Order**,** In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, CC Docket No. 93-162, June 13, 1997, Paragraph 147.

[31] Paragraph 49 of the NPRM appears to suggest, incorrectly, that the TELRIC models presume that the ILEC builds a network to serve the total demand in a study area. Neither of the sources cited in the NPRM, *Local Competition Order*, CC Docket No. 96-98, released August 8, 1996, 11 FCC Rcd at 15848-49, Paragraph 685; 47 C.F.R. § 51.505(b)(1), state or imply that the cost analyst should assume that the ILEC serves the enter market. Neither have the cost studies been designed to estimate the cost of serving the entire market.

[32] Washington State Utilities and Transportation Commission In the Matter of the Pricing Proceeding for Interconnection, Unbundled Network Elements, Transport, and Termination, and Resale, Docket No. UT-960369, Eighth Supplemental Order, April 16, 1998, Paragraphs 61, 269-70. Also, see summary table, Appendix B: "Factor into the loop cost the likelihood that a drop in market share increases the unit cost".

Furthermore, the Order's findings on structure sharing were founded in the record evidence regarding structure sharing in the state of Washington. A significant amount of this evidence was collected through the depositions of field engineers.[33]

40. The approach of the WUTC illustrates the states' desire to develop cost estimates that reflect the operations of the market in their jurisdiction. A departure from this approach, that is, making national assumptions about costs, would result in inferior cost estimates that did not reflect the operations of the telecommunications market.

4.1 Wholesale and Retail Costing Methodologies Should be Consistent in Order to Avoid a Price Squeeze

41. The Bell System had a long history of basing its costing on what it would cost to provide service if its network were rebuilt using the state of the art technology. Throughout the period that AT&T was regulated until the early 1980s, there were numerous private line filings of the ILECs which, along with their competitive Centrex filings, showed why it was economically efficient to evaluate the reasonableness of rates on cost studies that assumed high levels of loop utilization and/or no loop costs because the cost of the loop was sunk.[34] Although this practice predominated with AT&T under private line cases in the 1970s, it has also occurred in more recent cases at the state and federal levels.[35]

Washington was not the only state to take this approach. For example, the New Mexico State Corporation Commission also took into account the impact of competition when developing the cost of the unbundled loop. The Commission noted its agreement with US WEST that "a loss in market share [s]hould be reflected in the estimate of the economic cost of the loop." In the Matter of the Consideration of the Adoption of a Rule Concerning Costing Methodologies, Docket No. 96-310-TC, July 15, 1998, Paragraphs 83-85, 332-35, quote at Paragraph 84.

[33] Washington State Utilities and Transportation Commission In the Matter of the Pricing Proceeding for Interconnection, Unbundled Network Elements, Transport, and Termination, and Resale, Docket No. UT-960369, Eighth Supplemental Order, April 16, 1998, Paragraphs 43-76.

[34] We mention the loop here and elsewhere for illustrative purposes. We use the loop for illustrative purposes because it is the most important UNE in terms of being essential for providing telecommunications services and being risky and expensive to construct.

[35] For example, in a proceeding in Pennsylvania, Bell Atlantic declared that its selection of utilization method "depend[ed] on the purpose of the study." Bell Atlantic used different unit costs for facilities, depending on whether the service was a competitive or a monopoly service. Even though the same facility was shared by competitive and non-competitive services, Bell Atlantic *assumed* that the unit cost of a facility was lower for competitive than for monopoly services. The company justified this assumption on the grounds that the utilization level for competitive services might become higher. Pennsylvania Public Utility Commission, Competitive Safeguards, Recommended Decision of Administrative Law Judge in Case M_00940587, 212, 215, February 29, 1996.

For a case at the federal level, see Paragraphs 55-58 which discuss the 1994 New Jersey Video Dialtone Order, CC Order and Authorization 94-180, In the Matter of the Application of New Jersey Bell Telephone Company for Authority Pursuant to Section 214 of the Communications Act of 1934, as Amended, to

42. With the passage of the 1996 Telecommunications Act, the RBOCs sponsored a new set of assumptions that led to higher cost estimates for UNEs. The combination of low cost estimates in retail cost studies and supporting different assumptions for UNEs can easily result in a price squeeze that deters entry. An entrant could be squeezed out of the market because it often needs to rent loop facilities from the incumbent.

43. If the ILEC presumes for its retail service that the fill rate is 80%, but assumes 40% for UNEs, then, all else equal, the incumbent has a tremendous price advantage. For example, assume that the forward-looking cost for a fully utilized loop is $10. After adjusting for utilization of 80%, the ILEC would have a retail price floor of $10/80% = $12.50, while the UNE price would be $25 ($10/40%). Therefore, the CLEC could be squeezed out of the market because it pays a rate for a loop that is 100% higher than the cost floor of the incumbent.

44. This is not a hypothetical example – rather our statement is based on our observation of how studies have been undertaken by the ILECs. The practice of the ILECs to modify their costing practices in order to achieve market objectives was one of the primary charges made against AT&T in the 1974 anti-trust case.[36] After the divestiture of the Bell System, the RBOCs continued to select unrealistically high fill rates because they wanted to have the pricing flexibility to squeeze equally efficient firms out of the market.[37]

4.2 Alternative Methodologies Proposed In Order To Make The Methodology More Closely Account For Real-World Attributes

45. The NPRM, at Paragraph 52, tentatively concludes that the "TELRIC rules should more closely account for the real-world attributes of the routing and topography of an incumbent's network in the development of forward-looking costs". In this section, we discuss the two methodological changes proposed at Paragraphs 53 and 54.

46. Paragraph 54 of the NPRM poses the question concerning whether or not the relevant network should reflect ILEC engineering plans and planned upgrades over the next 3-5 years. We believe that the Commission cannot look at the plans of the ILECs because of the uncertainty associated with forecasts, and because construction budgets do not have the detail that would be needed for a cost study. For example, BellSouth

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Construct, Operate, Own, and Maintain Advanced Fiber Optic Facilities and Equipment to Provide Video Dialtone Service Within a Geographically Defined Area in Dover Township, Ocean County, New Jersey, File No. W-P-C-6840, July 18, 1994.

[36] Roger G. Noll and Bruce M. Owen, "The Anticompetitive Uses of Regulation: *United States v. AT&T* (1982)," in The Antitrust Revolution, Eds. John E. Kwoka and Lawrence J. White, 1989, pp. 309-312.

[37] Brief of the Michigan Public Service Commission (MPSC) Before the Michigan Court of Appeals, Court of Appeals Case No. 165102, MPSC Docket No. U-10225, January 6, 1994, Pages 19, 25.

stated in the Marginal Cost Symposium held by the National Regulatory Research Institute (NRRI) in 1991 that it is not possible to construct a cost study based on construction expenditures since the latter are not sufficiently detailed.[38] There are, of course, many other problems associated with using construction expenditures. First, when ILECs have tried to use their construction budgets to identify the cost of a loop, they have recognized the need to distinguish expenditures associated with growth, modernization and maintenance. For example, if the intention is to identify the cost of a loop used for POTS, expenditures associated with providing high-speed data services must be excluded. It is nearly impossible to validate which part of construction expenditures should be allocated to growth, to modernization, and to maintenance.

47. Furthermore, in an exchange, there may be a need to add loops for say 10% of the customers in a three year planning period. What would then be the appropriate cost estimate for the other 90% of the loops? It would be hypothetical and wrong to assume that the other 90% of the loops had the same forward-looking costs, because we know that they did not. The incremental capital cost of serving the other 90% of the loops, in this example, would be zero. The incremental capital cost would be zero because in the study period time horizon, there is adequate capacity to assume these customers.

48. In order to circumvent this problem, it is a widely accepted convention that a cost estimate for a telephone company should reflect its long-run incremental cost. Long-run is defined in terms of the time period when all inputs to the production are variable. If the Commission modifies this standard, it will have to convert an intermediate or short-run cost study into a long-run study. The conversion, by, for example, assuming that the 90% of the customers who require no new capital expenditures will require the same expenditures as the remaining 10%, will reflect a distortion of what will be experienced during the study period.[39] Therefore the proposed modification will result in a reliance on flawed data and will produce cost estimates that are inferior in reflecting the long-run incremental costs incurred by a supplier.

49. Finally, the Commission should not rely heavily on demand or cost forecasts because the RBOCs have previously argued before the Commission that a forecast that

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[38] NRRI. Marginal Cost Techniques for Telephone Services: Symposium Proceedings, January 1991, Page 67, Footnote 15.

During the 1980s AT&T unsuccessfully tried to base its incremental cost studies on its construction budget. AT&T found it difficult to obtain sensible cost/output relationships for a number of reasons. For example, it was difficult to determine what was the correct lag between a change in demand and a change in expenditures.

[39] Furthermore, the observed construction expenditures may not be representative of the population. There is no reason to believe that the expenditures during the study period provide an unbiased estimate of the average cost of a loop. Moreover, there is good reason to believe that it will be biased. The length of the loops may be longer due to green-field activity in new developments on the outskirts of a city. Furthermore, the structure and placement costs incurred in green-field areas may not be representative of the population average. The tendencies bias the estimates in the opposite directions. There is no reason to assume that the biases would offset one another.

extends beyond more than three years amounts to fortune telling. The ILECs previously informed the Commission "that they cannot [reliably] forecast relative non-regulated and regulated usage over the lengthy depreciation lives of most network plant".[40] The Commission accepted the ILECs' position and remarked that long-term forecasts are closer in method to "fortune-telling...[than] reasoned analysis".[41] Therefore, expenditures are being made that have a long-life but we are told by the ILECs that we should not have any confidence in their forecasts. Thus, it is inconsistent to use these forecasts to develop unit costs when we are told that the forecasts are unreliable.

50. The Commission suggests an alternative methodology at Paragraph 53 of the NPRM. The Commission suggests that a replacement cost methodology may be appropriate because it would be more representative of the real world and thereby less hypothetical. The replacement cost methodology will do nothing to promote certainty or reduce the complexity of the TELRIC proceedings. The replacement cost methodology was widely used in the first part of the twentieth century. The methodology suffered from practical problems and was not operable at the state regulatory level. Engineering estimates required to estimate the cost of reproduction were inexact, and often contradictory. Furthermore, when presented with a company's present valuation study of its physical plant, many state commissions were financially incapable of undertaking an independent appraisal to verify the study as such appraisals were extremely expensive and time consuming. For example, in a telephone rate case, the Minnesota Commission undertook an exhaustive physical valuation of the telephone plant in question that required three years and almost $1,000,000 in expenditures by the state and company to complete.[42]

51. At Paragraph 58 of the NPRM, the Commission points out that the ILECs have been operating under price-caps for a number of years and therefore they are presumably operating efficiently. In the USF proceeding, the ILECs, operating under price-caps, provided what they contended were their recent outside plant construction expenditures associated with installing new plant. The Commission did not adopt the values because of the lack of supporting documentation and because the cost estimates appeared unreasonably high.[43] This outcome suggests that the ILECs were not operating efficiently.

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[40] "Separation of Costs of Regulated Telephone Service From Costs of Nonregulated Activities", CC Docket No. 86-111, 2 Federal Communications Commission Record, Pages 6283, 6285.

[41] Ibid., Page 6288.

[42] Nebraska State Railroad Commission, Re: Northwestern Bell Telephone Commission, RE: Northwestern Bell Telephone Company PUR 1923B, p. 117-20. See, also, Wisconsin Telephone Company, PUR 1927A, pp. 584-5; PUR 1925A, pp. 584-5; and PUR 1925D.

In current dollars, this is equivalent to approximately $9 million. Performing a similar study today would be far less expensive because of the advent of computerized database systems.

[43] Federal Communications Commission, Tenth Report and Order, In the Matter of Federal-State Joint Board on Universal Service (CC Docket No. 96-45) and Forward-Looking Mechanism for High Cost

52. At Paragraph 58 of the NPRM, the Commission asks how difficult would it be for competitive LECs to develop evidence to judge the reasonableness of the ILECs' cost estimates. Judging from the Commission's inability to obtain useful cost data from the ILECs, an assumption that the ILECs' reported costs are efficient would likely lead to the establishment of unreasonably high input values, and thereby inefficiently high UNE prices.

53. Finally, at Paragraph 53 of the NPRM, the Commission states: "the UNE pricing methodology, while forward-looking, must be representative of the real world and should not be based on the totally hypothetical cost of a most-efficient provider building a network from scratch. To that end, the UNE cost study should be based upon the incumbent LEC's actual network topography and currently available, forward-looking technologies." To the best of our knowledge, the states have only incorporated currently available forward-looking technologies into the approved studies.[44] Furthermore, as described in Paragraphs 140-144, the states have encouraged the parties in cost proceedings to submit cost studies that reflect the geo-coding of customer locations. Finally, and most importantly, some states, taking guidance from the Commission's universal service order, have required that the loop lengths generated by the cost models be consistent with the ILEC's actual loop lengths.[45] The Universal Service Order also required the model to not "impede the provision of advanced services". This requirement mandates that the network be redesigned -- it cannot simply be replaced. We recommend that the Commission adopt this same standard for UNEs that it established for universal service models.[46]

Support for Non-Rural LECs (CC Docket No. 97-160), November 2, 1999, Paragraphs 107-11. http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/fcc99304.txt

[44] For example, in Washington, the Commission did not accept WorldCom's proposal to estimate nonrecurring costs based on forward-looking systems manufactured by Lucent. The Commission stated that "WorldCom had "fail[ed] to establish that the alleged forward looking systems…are currently available and function as represented". In the Matter of the Continued Costing and Pricing of Unbundled Network Elements, Transport, and Termination Docket No.UT-003013, Forty-First Supplemental Order; Part D Initial Order; Establishing Nonrecurring and Recurring Rates for UNEs.

[45] The Commission expressed its interest in validating the reasonableness of the results of the models by comparing actual to estimated loop lengths. In the Matter of Federal-State Joint Board on Universal Service, Report and Order, CC Docket No. 96-45, released. May 8, 1997 Paragraph 250 (Universal Service Order).

See, for example, Washington State Utilities and Transportation Commission In the Matter of the Pricing Proceeding for Interconnection, Unbundled Network Elements, Transport, and Termination, and Resale, Docket No. UT-960369, Eighth Supplemental Order, April 16, 1998, Paragraphs 224-27; and the 9th Supplemental Order In the Matter of the Pricing Proceeding for Interconnection, Unbundled Network Elements, Transport, and Termination, and Resale, Docket No. UT-960369, June 5, 1998, Paragraphs 45-54.

[46] The FCC should also require the ILEC's to provide a statistically valid estimate of the length of its drop wires by density zone. A significant amount of time has been wasted in cost proceedings as parties argue over which of their numbers constitute a better estimate of the length of a drop wire.

4.3 If The Commission Concludes That It Is Inappropriate To Consider The Forward Looking Network, Then It Must Require The ILECs To Redo All Of Their Incremental Cost Studies

54. If the Commission chooses not to consider forward-looking costs, but rather the replacement cost studies identified at Paragraph 54, the question must be posed -- what rules exist for governing the methodology of the ILECs' other cost studies?

55. The rules for new services appear in Part 69 of the Open Network Architecture Order and Open Network Architecture Reconsideration[47], and were applied in the case of the New Jersey Dialtone Order in 1994.[48] Under Part 69, the rules required the submission of engineering studies and other cost studies and the Commission established pricing standards for new services to "…provide the LECs sufficient pricing flexibility to encourage innovation and efficient pricing while protecting against predatory pricing".[49]

56. In the New Jersey case, Bell Atlantic used capacity costing[50], and took the cost of fiber and divided it by the maximum number of customers that they thought they might attract. In this case, Bell Atlantic considered it appropriate to take the total cost and divide it by ultimate demand in order to get the unit costs used for rate development.

57. Yet, this type of methodology based on Part 69 rules has never been endorsed by Bell Atlantic or Verizon in the TELRIC proceedings -- in fact, in Massachusetts, they opposed the CLECs request to use a similar methodology, and proposed that the fill rate be based on the current fill factor or 10% higher.[51] In Maine, Verizon proposed to use the average fill rate over the life of a facility.[52]

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[47] Amendment of Part 69 of the Commissions Rules Relating to the Creation of Access Charge Supplements for Open Network Architecture: Policy and Rules Concerning Rates for Dominant Carriers, Report and Order & Order on Further Reconsideration & Supplemental Notice of Proposed Rulemaking, CC Docket Nos. 89-79 and 87-313, 6 FCC Rcd 4524 (1991) and second further reconsideration, 7 FCC Rcd 5235 (1992).

[48] FCC Order and Authorization 94-180, In the Matter of the Application of New Jersey Bell Telephone Company for Authority Pursuant to Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate, Own, and Maintain Advanced Fiber Optic Facilities and Equipment to Provide Video Dialtone Service Within a Geographically Defined Area in Dover Township, Ocean County, New Jersey, File No. W-P-C-6840, July 18, 1994.

[49] Ibid., Page 27.

[50] Reply Comments of Bell Atlantic In the Matter of Amendment to the Bell Atlantic Telephone Companies Tariff FCC No. 10, Video Dialtone Service, Transmittal No. 741-Amended, May 25, 1995, Page 6, Footnote 15.

[51] Investigation by the Department of Telecommunications and Energy on its own Motion into the Appropriate Pricing, based upon Total Element Long-Run Incremental Costs, for Unbundled Network Elements and Combinations of Unbundled Network Elements, and the Appropriate Avoided-Cost

58. It is important, therefore, to emphasize that the above methodology in the New Jersey case was accepted by the Commission -- even though it is a much different methodology than is used for TELRIC (which is based on current demand, and not forecasted maximum demand). At the same time, however, we are not endorsing using the demand over the life of a facility because it is too problematic to rely on demand forecasts for the life of a facility as we discussed at Paragraph 49. Therefore, as discussed in Section 7.3, we are recommending to use the current fill rate as the starting point for any analysis.

59. More generally, if the Commission is going to provide greater direction on how the TELRIC studies are completed, it must simultaneously mandate that the same methodology be deployed for the ILEC's retail cost studies. If inconsistent costing methodologies are accepted by the Commission, there is a possibility that efficient entrants will be excluded from the market.

4.4 Critics' Suggestions That The Reasonableness Of Rates Be Judged By Reference To Embedded Costs Conflicts With Their Positions On Multiple Topics

60. The NPRM notes that critics have argued that the current price setting process results in rates that discourage ILECs and CLECs from making investments. Rates are deemed to be too low when they are below the carrier's "`actual,'" or embedded costs.[53]

61. These criticisms are paradoxical coming from a group of consultants to ILECs who have regularly argued that it is inappropriate to judge the reasonableness of retail rates by comparing the prices to the embedded cost of service. The critics do not explain why embedded costs are relevant for judging the reasonableness of UNE rates but irrelevant for evaluating the fairness of retail rates.

62. Neither do the critics contentions of takings address the large premium paid for ILEC facilities. If the rates are too low, why are investors paying a large premium for telephone assets relative to the embedded cost of production?[54]

Discount for Verizon New England, Inc. d/b/a Verizon Massachusetts' Resale Services in the Commonwealth of Massachusetts, DTE, 2002, Page 172.

[52] Maine Public Utilities Commission, Public Utilities Commission Order Re: Investigation of Total Element Long-Run Incremental Cost (TELRIC) Studies and Pricing of Unbundled Network Elements, Docket No. 97-505, February 12, 2002, Page 25.

[53] NPRM, Paragraph 5.

[54] David Gabel and David I. Rosenbaum, "Who's Taking Whom: Some Comments and Evidence on the Constitutionality of TELRIC", 52, Federal Communications Law Journal, 239, 265-67 (2000)

63. Neither do the critics contend that the ILEC's retail price floor should be the embedded cost of service. Rather the ILECs, and their consultants, have argued for decades that the reasonableness of rates should be judged with reference to forward-looking, not embedded, costs.[55] For example, in 1990, George W. Costello, Bell Atlantic's Executive Director of Service Costs wrote that "forward-looking incremental costs [are] the appropriate pricing floor on which to base pricing decisions".[56] Costello asserted that embedded costs should not be used for pricing decisions because it would result in "non-economic and inefficient pricing policies".[57] Costello expressed concern that the misuse of embedded data for pricing decisions could "irreparably handicap local exchange companies."[58]

64. Just as basing retail pricing decisions posses the threat of placing an "irreparabl[e] handicap" on the pricing of ILEC retail services, the Commission should not handcuff the entrants by requiring them to pay a rate for UNEs that is based on the embedded cost of service. While we commend the Commission for raising the issue of what constitutes a reasonable UNE rate, we believe the answer is to be found somewhere else other than the embedded cost of service. Regulatory parity requires that the same pricing standard be used for both the ILECs' retail and wholesale cost studies.

65. We have not proposed an alternative standard for judging the reasonableness of the forward-looking cost estimates. There is only one standard for reasonableness that merits passing consideration--a comparison of the inputs used in the ILECs retail studies pre-Act with the inputs used in the cost studies post Act.[59] The ILECs retail studies identified the costs that they believed were relevant for pricing decisions. We believe that this approach has some merit because by using a consistent set of assumptions for retail and wholesale studies, the likelihood of a price squeeze is reduced.

66. This proposal only merits minor consideration because overall we believe that the appropriate test for reasonableness is the documentation provided by a party that aids the Commission's validation of the sponsored input values. Whereas the studies are forward-looking, the validity of a price is not established by comparing the price to the historical cost. Rather, a cost analyst must explain the basis for sponsoring an input

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[55] Id., pp. 256-259..

[56] "Determining the Economic Costs of Actions Requiring Regulatory Review," in *Marginal Cost Techniques for Telephone Services: Symposium Proceedings*, National Regulatory Research Institute, Columbus, Ohio, January 1991, NRRI 91-6, editor William Pollard, Page 666.

[57] *Id.* Page 676-7.

[58] *Id.* Page 679.

[59] We are cognizant that the pre-Act values are old but the ILEC would have the opportunity to explain, for example, why its utilization rates changed with the passage of the Act. If the ILEC could demonstrate that its actual utilization rates had changed significantly, it would be appropriate to reflect this change in the UNE study.

value and provide documentation that supports the proposed value. Out of this process will emerge a cost estimate for a rate element. The sanity check for the TELRIC rate is achieved by testing the reasonableness of the inputs to the cost model, as well as a review of the operations of the cost model.

5 The Commission Should Not Establish Pricing Rules That Are Designed to Exclusively Promote Facilities-Based Entry And Competition Because It Would Violate The Intent Of Congress Under The 1996 Telecommunications Act (Paragraphs 2 and 3 of the NPRM)

67. The Commission seeks to have UNE rates promote facility-based entry, according to Paragraphs 2 and 3 of the NPRM. The question therefore needs to be asked -- what policy or set of policies would best promote facility-based entry?

68. The Commission must, consistent with the explicit direction provided by Congress, maintain the requirement that an ILEC provide UNEs unless entrants are not impaired.[60] Therefore, the Commission should promote UNE price methodologies that are consistent with the dual requirements of promoting facility-based entry while still keeping UNEs a viable entry platform that will, among other things, help the Commission fulfill the statutory requirement of providing benefit to consumers through lower retail prices.[61]

5.1 The Commission Cannot Effectively Select UNE Prices To Promote Facilities-Based Competition Because It Cannot Effectively Determine Entrants' Cost Structures

69. The Commission has proposed in Paragraphs 3 and 51 of the NPRM that UNE rates be set to promote facility-based competition. The Commission's Triennial Review Order took substantive steps to encourage the ILECs to make infrastructure investments.[62] In light of the Commission's determination that advanced telecommunications services, such as packet switching,[63] did not have to be provided as a UNE, it is unclear what

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[60] Section 251(d)(2)(B) of the 1996 Telecommunications Act.

[61] Preamble to the 1996 Telecommunications Act.

[62] For example, the Commission determined that the removal of FTTH loops from the list of UNE elements would encourage ILECs to invest in this type of platform, TRO, Paragraph 278.In light of the Commission's determination that advanced telecommunications services, such as packet switching (Id., Paragraphs 537, 541) did not have to be provided as a UNE, it is unclear that increasing UNE prices will have a significant impact on the ILECs' decisions to deploy advanced telecommunications services.

[63] Id., Paragraphs 537, 541.

impact a price increase for a loop used to provide voice service will have on the ILECs' decisions to deploy advanced telecommunications services.

70. This essentially requires building of a business model for entrants and incumbents in order to determine what price levels make an economically significantly difference in firm's investment decisions. Construction of business models, however, is problematic because of the substantial information requirements. It is thus paradoxical that the Commission would propose that it might be able to construct a business model when it is on the record as not believing that reliable long-run forecasts can be constructed, and adopted price caps partly as an outgrowth of the former Chairman's conclusion that the Commission could not accurately model costs.[64] Demand forecasting and cost estimation is at the heart of building a business model. Surely, the Commission cannot effectively determine the entrants' cost structures if it cannot effectively forecast either the incumbents' or the entrants' revenues that would be generated from new facilities.

71. We do not believe that the Commission can effectively select UNE prices that strike the proper balance between encouraging facilities-based entry and price competition. In order to satisfy the first objective, the commission must be able to know the cost structure of the potential entrant and the long-run demand for its services. The TELRIC proceedings have illuminated how difficult it is to understand the cost structure of the incumbent, even at the state level, and greater difficulties would occur if the Commission attempts to determine entrants' cost structures.

72. We must also pose the question -- how will the Commission obtain information on the profitability of entry? As pointed out earlier at footnotes 40 and 41 it is nearly impossible to obtain a credible long-run forecast of demand for services. Even if this information was easily obtained, the Commission would still need to be able to model how an entrant anticipates an incumbent will react to its entry because a potential entrant's decision is influenced by its belief about what will happened to prices and service offerings post-entry. This inquiry into profitability is essentially what the Commission deferred to the states in the Triennial Review Order.[65]

73. Thus, if the Commission travels down the road of setting UNE prices in a manner that purports to promote facilities-based entry to a greater extent than under the current pricing methodology, it will be necessary to accurately forecast the entrants' business, market, and pricing strategies, costs, forecasted demand, and beliefs about the evolution of the industry. Clearly, this is a challenging feat.

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[64] "Separation of Costs of Regulated Telephone Service From Costs of Nonregulated Activities", CC Docket No. 86-111, 2 Federal Communications Commission Record, Pages 6283, 6285; and New York Times, 20 September 1990, Page D2.

[65] TRO, Paragraphs 515-520.

74. Inefficiency can occur when there is either too little or too much facilities-based entry. Thus, if the Commission creates UNE rates with the objective of setting a price that will deliver efficient entry, it must estimate all of the above parameters correctly -- if it does not, it will either impede efficient facilities-based entry (by setting UNE rates too low) or encourage too much entry (by setting UNE rates too high).

75. In light of these challenges, the Commission should be reluctant to use the UNE pricing mechanism to encourage investments. There is a possibility that regulators will choose the wrong price level that is associated with some undefined optimal level of Investment.

76. Can intelligent decision-makers make mistakes in this area even with good information? Clearly the answer is yes -- witness the telecommunications meltdown of 2000 and beyond where too much was invested in the industry on the basis of inaccurate forecasts and misguided "market exuberance".[66] Moreover, much of this overinvestment occurred in the unregulated interstate market (long-distance transport markets) where the fill rate for interstate fiber networks is regularly reported to be in the range of 2-3%.[67] Therefore, when reviewing the shakeout in the telecommunications industry, it is important to isolate the impact of regulatory policies and not assume that the decline in the standing of facility-based entries is due to a shortcoming of the process of implementing the Commission's current TELRIC pricing standard.

77. Dr. Gabel has shown that low UNE rates, relative to the embedded cost-of-service, can inhibit facility-based investment by the ILECs and CLECs.[68] However, it does not follow from this that the Commission should set higher UNE prices in order to increase the level of investment. As argued in this section, regulatory commissions should focus their effort on their area of competency -- estimating the cost of providing a UNE using the current TELRIC methodology. Commissions should not presume that they can do a better job than Wall Street of estimating the optimal level of facility-based investments.

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[66] Larry F. Darby, Jeffrey A. Eisenach, and Joseph S. Kraemer, The CLEC Experiment: Anatomy of a Meltdown, Release 9.23, Periodic Commentaries on Policy Debate, The Progress and Freedom Foundation, September 2002, Page 19.

The economics literature on market shakeouts also identifies numerous sources for exit from an industry including "a bad initial judgment of market opportunities, managerial incompetence, or simply the fact that the entrant set up a business which had only modest prospects of survival" in John Sutton, "Gibrat's Legacy," Journal of Economic Literature, 35 (March 1997), Page 47.

[67] Gregory Zuckerman And Deborah Solomon, "Telecom Debt Debacle Could Lead To Losses of Historic Proportions", The Wall Street Journal, May 11, 2001.
http://online.wsj.com/article/0,,SB989529942146989425,00.html

[68] David Gabel and Guang-lih Huang, "Promoting Innovation: Impact Of Local Competition And Regulation On Deployment Of Advanced Telecommunications Services For Businesses," http://itc.mit.edu/itel/docs/2003/promo_innov.pdf

Rather, if state commissions set the appropriate price for UNEs, the markets can determine the optimal level of facility and non-facility based competition.[69]

78. Wall Street and other investors incorrectly forecasted the demand for transport facilities and this resulted in too much investment flowing for facility-based entry and expansion of existing networks. Should the Commission's ability to predict the future market for facility-based entry be considered superior to Wall Street's -- especially in light of the Commission's own conclusion that it is not possible to get credible long-term demand forecasts?[70]

79. The states need to be cognizant of the trade off between price competition today and investment. Based upon our participation in state proceedings, we do not think that this issue has been given sufficient attention by the parties, and therefore, by the state commissions. The Commission can point out to the states the link between UNE prices and entry,[71] however, it would be inappropriate for the Commission to write UNE pricing rules with the objective of establishing an optimal level of facility investment.

80. We therefore propose that the Commission and the states should do what they can do well -- obtain a good estimate of the cost of UNEs pursuant to the statutory requirement, and then leave it to private firms to decide when to make investments. This will provide the greatest chance of promoting efficient facility-based competition.

6 The Role Of The States

81. There is one extremely logical reason for giving states discretion in setting the economic parameters governing cost studies. If the Commission develops and implements a policy that applies to all fifty states, and in doing so makes a mistake, the effect is large because the Commission's rules are binding on all of the states. The states will likely continue to achieve better results by experimenting and learning from one another than they will by applying an inflexible, uniform standard set by the Commission.

82. An example of why its good to give the states some latitude can be demonstrated in the case of the pricing of line sharing. The Commission initially recommended that the

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[69] The view expressed here is the complement of our position that retail price competition should not be promoted by lowering UNE rates for the mere purpose of promoting competition. We contend that UNE rates should be based on the best possible estimate of the economic cost of production and should not be lowered for the purpose of promoting price competition. See, for example, Direct Testimony of David Gabel, In The Matter Of The Petitions Of Verizon Florida Inc., BellSouth Telecommunications Inc., And Sprint-Florida Inc. To Reform Their Intrastate Network Access And Basic Local Telecommunications Rates In Accordance With Florida Statutes, Section 364.164, Page 40, October 30, 2003.

[70] "Separation of Costs of Regulated Telephone Service From Costs of Nonregulated Activities", CC Docket No. 86-111, 2 Federal Communications Commission Record, Pages 6283, 6288.

[71] TRO, Paragraph 178.

price of line sharing be set at zero.[72] However, now the Commission believes that it erred in the past, and has subsequently mandated a non-zero price.

83. Despite the Commission's initial support for a zero price, states like Washington realized that a price of zero for line sharing would result in underinvestment in advanced telecommunications services.[73] By providing latitude to the states, less harm was done to infrastructure investment than would have occurred if the Commission had mandated a zero price.

84. In the following sections, we draw on our experience working with the states, and our knowledge of Commission procedures, to address some of the model input changes proposed by the Commission.

6.1 State Commissions Spend An Appropriate Amount Of Time In Determining Reasonable UNE Rates

85. The NPRM observed that several states took a long time in determining UNE rates.[74] While this is true for the selected states, it does not imply that the time period was excessive, and it does not include an observation about other states that have completed UNE investigations in less time. On the other hand, while the Commission also took a long time to decide the Virginia Arbitration case, the one case it had to decide,[75] states have decided multiple cases for more than one carrier. Because of state action, the Commission has saved significant amounts of time. In fact, if the Commission had to determine the rates in all states, there would still be many states without rates because the Commission does not have enough staff to deal with all of the issues that face all of the states. The time that the states have taken is appropriate and has been used in a positive manner because the state-approved rates are reasonable and are predictable. See below Sections 6.2 and 6.3.

86. Moreover, the state commissions not only have the legal requirement to determine UNE rates, they also, as recognized by the Commission, have extensive knowledge of

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[72] Federal Communications Commission, Triennial Review, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking in the Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers (Docket Number 01-338), Implementation of the Local Competition Provisions of the Telecommunications Act of 1996 (Docket Number 96-98), and Deployment of Wireline Services Offering Advanced Telecommunications Capability (Docket Number 98-147), August 21, 2003, Paragraph 260.

[73] Before the Washington State Utilities and Transportation Commission In the Matter of the Continued Costing and Pricing of Unbundled Network Elements, Transport, and Termination, Docket No. UT-033013, Thirteenth Supplemental Order; Part A Order Determining Prices for Line Sharing, Operations Support Systems, and Collocation, January 2001, Paragraphs 61-63.

[74] NPRM, ¶ 6.

[75] The public notice establishing the pleading cycle in CC Docket 00-218 was released on October 27, 2000, and the Memorandum and Order was released on August 29, 2003.

details of the state markets, and telephone infrastructure.[76] They are able to examine the facts and make the detailed decisions that are required for determining reasonable UNEs. The Commission must recognize that this knowledge does not develop instantaneously. It is developed through hard work, and to do this work in state dockets appropriately, the state commissions cannot complete such efforts in 90-day timeframes. The states also hold public hearings.

87. State commissions are the appropriate venue for determining UNE rates. At the state commissions, all parties, including consumer groups, have an equal opportunity to present evidence and file briefs. If decisions are moved to the Commission, then those consumers groups that cannot afford to maintain a presence in Washington D.C. will be placed at a disadvantage relative to the other parties in the dockets.

6.2 State Approved Rates Are Predictable And Reasonable Because The Pattern Of Rates Is Consistent Overtime And Relative To Embedded Costs

88. The NPRM observes that "the lack of predictability in UNE rates is difficult to reconcile with our desire that UNE prices send correct economic signals."[77] While we agree that a lack of predictability could send the wrong signals, we do not observe a lack of predictability in the setting of UNE rates.

89. To demonstrate the predictability of these rates, we have determined several Spearman correlations for loop rates. These correlations measure the change in rank in UNE rates between one series and another. For example, if each state's rank is the same in the two series than the Spearman correlation would be one. However, if the first state in one series is last in the other series, then the correlation would be minus one. Therefore, a high positive Spearman correlation would indicate that there is a consistency between the ranking of the two series.

90. The first correlation examined was between the UNE loop rates and the average embedded cost loop cost as measured by the universal service high cost loop embedded cost algorithm.[78] While embedded and forward-looking costs are not equal, there are factors that would cause the ranking by state to be equal. For example, loop costs are generally considered to be a function of customer density and terrain. These factors would affect both forward-looking and embedded costs in a similar fashion.

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[76] TRO, ¶ 425.

[77] NPRM, ¶ 7.

[78] National Regulatory Research Institute, A Survey of Unbundled Network Element Prices in the United States, www.nrri.ohio-state.edu/documents/uneprices, and www.cad.state.wv.us for UNE loop rates. For embedded cost estimates see the Universal Service Fund 2003 Submission of 2002 Study Results by the National Exchange Carrier Association, Inc. (NECA), filed in accordance with section 36.613 of the Commission Rules., filed October 1, 2003.

However, there are other factors that would cause a divergence in the embedded and forward-looking costs. For example, in high-growth states, the percentage of loop plant that has not been depreciated would probably be higher than in low-growth states. This fact would not affect the forward-looking cost estimates because all states begin with a zero depreciation reserve. The different growth rates, however, are very important in determining embedded cost estimates because a higher depreciation reserve reduces the rate base and the cost of the service.

91. Even with this qualifier, correlation of embedded cost rank and forward-looking rank is indicative of the predictability of the forward-looking cost. To determine the correlation, each state is ranked between 1 and 49 with 1 being the lowest cost state and 49 the highest cost state. These rankings were established for both the embedded cost estimates and the forward-looking estimates. The resulting Spearman correlation of these rankings was 0.613, indicating a statistically significant positive correlation between the two series.

92. The second correlation was between the UNE loop rates in May 2001 and July 2003. This Spearman correlation was .733. This high positive statistically significant correlation shows that states that had relatively high UNE rates in 2001 also had relatively high UNE rates in 2003. The statistically significant positive correlation also shows that even though states have had to investigate complex TELRIC models which "creates the potential for a TELRIC proceeding to become a 'black box' form which a variety of possible rates may emerge,"[79] states have been able to see through the box and have been able to maintain reasonable and predictable rates.

6.3 State Approved Rates Are Predictable And Reasonable Because The Pattern Of Rate Change Is Consistent With Other Telephone Industry Rates

93. UNE loop rates have decreased over the last several years. The unweighted decrease in UNE loop rates was 6.6 percent from May 2001 to July 2002 and 9.9 percent from July 2002 to July 2003, while the weighted decrease in UNE rates was 6.7 percent from July 2002 through July 2003.[80]

94. The UNE rate decreases, in general have occurred as carriers have attempted to qualify for Section 271 approvals. For example, for the period after July 2002, 33 carriers received Section 271 approvals. UNE loop rates were decreased for 23 of those 33 or for approximately 70 percent of the carriers. For the remaining 16 carriers tracked, UNE loop rates changed for only 3 carriers, or for only approximately 19 percent of the carriers. This implies that most of the rate decreases were associated with carriers attempting to meet the Commission rate benchmarks in order to obtain

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[79] TRO, ¶ 7.

[80] National Regulatory Research Institute, A Survey of Unbundled Network Element Prices in the United States, www.nrri.ohio-state.edu/documents/uneprices, and www.cad.state.wv.us

Section 271 approvals. In addition, it implies that the frequency of UNE rate cases will decrease now that carriers have succeeded in obtaining Section 271 approvals. The reduction in caseload will reduce the regulatory burden on both the state commission and the carriers. Therefore, there is no need for the Commission to take extra-ordinary steps to reduce a regulatory burden. Instead, the Commission should allow the states to continue to address required changes in UNE rates whenever the state commission determines on its own discretion that there is a need to review the rates or whenever parties petition the state commission to review the rates.

6.4 State Commissions Must Be Permitted to Adopt Model Inputs and Methodologies Based Upon The Reasonableness Of Each Assumption And Not Their Relationship To The USF Inputs Order

95. The NPRM sought comment on the relationship between the rules it adopted in Universal Service Docket and its TELRIC rules.[81] The NPRM also continues "to discourage states from using the nationwide inputs for the purposes of developing UNE prices".[82] While we agree that the cost model inputs adopted in the USF Inputs Order should neither be mandated by the Commission nor indiscriminately employed by states as a one size fits all solution UNE cost proceedings, we disagree with the general characterization that some states have inappropriately used these inputs to justify adopting inputs that are backward looking, and/or not reflective of real world conditions. As a whole, these descriptions are inconsistent with the Commission's stated intent to refrain from providing state commissions with systematic input guidance based on the USF Inputs Order.[83] More specifically, these descriptions are erroneous when considering the foundation of the key cost model inputs discussed in Paragraphs 46, 47, 71, and 72 of the NPRM.

96. Paragraph 46 of the NPRM notes that in developing the model and inputs necessary to calculate universal service funding, the Commission did not intend to provide any systematic guidance to states in the area of TELRIC rate-setting. The Commission cautioned parties from making any claims in other proceedings based upon the input values it adopted in the USF Inputs Order.[84]

97. The Commission's caution regarding the inputs adopted in the USF Inputs Order is understandable because the Commission adopted nationwide average inputs rather than state specific inputs. For example, the Commission determined structure inputs for zones 3 through 9 based on the weighted average of state commission approved inputs.[85] Thus, the Commission determined its inputs based on the full and complete

[81] NPRM at Paragraph 48

[82] NPRM at Paragraph 46

[83] See, NPRM at Paragraph 46.

[84] USF Inputs Order at Paragraph 32.

record developed by eight states. In warning the states that it may not be appropriate to use the Commission inputs, it appears that the Commission was suggesting that each state should depend on its on record rather than on an average of the record of eight states. Thus, there exists an inconsistency in the Commission's current position because the Commission is now planning to provide states 'systematic guidance' regarding appropriate cost model inputs for state commissions to consider when setting UNE rates when in the past Commission had to rely on the very same state commissions to determine the input values used in the Universal Service model.

98. However, the Commission should not prohibit states from using the inputs adopted in the USF Inputs Order In many instances, the inputs adopted in the USF Inputs Order are the most objective and verifiable data on record from which state commissions can support a decision.[86] Rather the states should build on the record acquired by the Commission in the Universal Service docket and compare that record to information gathered within their respective states. Preemptively excluding these inputs without considering their individual merits would negate a valuable source of highly scrutinized, publicly available data, and thus, compromise the effectiveness of state cost proceedings by further distorting the asymmetric distribution of information towards data proffered by ILECs.[87]

99. The general characterization of the inputs adopted by states as backward looking, and/or not reflective of real world conditions is erroneous.[88] As noted above, this statement is particularly wrong with respect to structure sharing because it ignores the fact that the structure sharing inputs ultimately adopted in the USF Inputs Order were largely derived from values developed in a UNE cost proceeding in the state of Washington.[89] Thus, it is clearly wrong to suggest that these inputs were developed with only universal service requirements or relative cost estimates in mind.

7 Specific Network Input Issues

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[85] Id. at Paragraphs 220-221.

[86] See for example, In the Matter of In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Jurisdiction of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc., and for Expedited Arbitration CC Docket No. 00-218, DA 03-2738,("Virginia Arbitration Order") at Paragraphs 283 and 287.

[87] See Local Competition Order at Paragraph 680.

[88] Letter from Cronan O'Connell, Vice President-Federal Regulatory, Qwest, to Marlene H. Dortch, Secretary, Federal Communications Commission at 12 (Oct. 28, 2002) filed in CC Docket No. 01-338.(Qwest Letter).

[89] See USF Inputs Order, Paragraph 246, citing WUTC Docket No. UT 960396, 8th Supplemental Order, Paragraphs 73-76.

100. In this section of the affidavit, we address a number of cost model input issues raised in the NPRM.

7.1 The Commission Should Not Require State Commissions To Adopt Any Particular Methodology For The Purposes Of Determining Assets Lives And Depreciation Rates

101. The NPRM states that "the issue of assets lives is one where we believe more guidance from the Commission would be helpful to state commissions."[90] To the contrary, the Commission should continue to rely on state commissions to determine assets lives and the other depreciation parameters. State commissions have a long and successful history in determining these variables, not only for telephone but also for gas, electric and water utilities. These decisions have allowed utilities to recover their existing investments and finance a growing infrastructure. However, if the Commission wishes to provide guidance then we recommend that the guidance become a restoration of three-way meetings with the addition of a fourth party, the public advocate, to determine jointly the assets lives of the equipment used in the TELRIC cost studies. This process, rather than an arbitrary choice of a particular set of asset lives or asset life methodology, will better serve the industry as we work together to solve the very difficult problem of predicting the service life of an asset.

102. To support our position we, first, provide analysis of the relationship between depreciation and the economic value of network assets. Second, we review the general level of depreciation rates, retirements and reserves. Third, we examine the debate between the use of GAAP depreciation lives and the Commission authorized lives. Finally, we investigate the relationship between depreciation and TRO changes in the provision of UNEs.

7.1.1 Book Versus Economic Value Of Assets

103. With respect to economic depreciation and the value of network assets, the Commission notes that:

> The economic value of a capital asset is likely to decline more quickly if new, more efficient (*i.e.*, more productive or less expensive) capital assets are introduced that would increase the net present value of expected cash flows associated with the new assets.[91]

104. Though we agree with the Commission's logic, we do not believe that the advent of new technologies has significantly depreciated the value of capital assets in the telecommunications industry. If these assets were actually declining rapidly in value,

[90] NPRM, ¶ 97.

[91] NPRM, Paragraph 12.

then market value should be less than book value since standard book depreciation would be understating the true loss in value. However, there is no evidence that the market value is lower than the book value -- in fact, even though the ILECs contend that state regulatory commissions use excessively lengthy depreciation schedules the evidence indicates the opposite is true. For 1998, data in Arkansas and Nebraska show that GTE was selling domestic access lines at 2.6-3.7 times book value, while the SNET/SBC merger in the same year indicated a ratio of 1.8 for market to book value of assets.[92] Alltel's 2002 purchase of Verizon South's Kentucky study areas for almost 4 times the book value of the assets also supports our contention that the market value of telephone assets has not been eroded by the introduction of new technologies.[93]

7.1.2 General Level Of Depreciation Rates, Retirements, And Reserves

105. The general national levels of depreciation, retirements and reserves are shown in Table 1. The table shows the trends in these relationships for the period from 1992 to 2002 for all Bell Operating Companies and GTE. The percentage of assets retired has averaged 3.9 percent annually. The depreciation rate for all assets averaged 7 percent, and the reserve ratio increased from 38.4 to 54.3 percent.[94]

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[92] David Gabel and David Rosenbaum. "Who's Taking Whom: Some Comments and Evidence on the Constitutionality of TELRIC" in Federal Communications Law Journal, February 2000, Volume 52, Pages 265-266.

[93] The purchase price was approximately $1.9 billion, while the book value was $478 million. Sources: for market value: Wall Street Journal, "Alltel Agrees to Buy Phone Lines From Verizon in $1.9 Billion Deal"; October 31, 2001. http://interactive.wsj.com/archive/retrieve.cgi?id=SB100456442797802280.djm

For book value: ARMIS 43-01, for Verizon South/GTE (Study Area Code 260407) and Verizon South/Contel (Study Area Code 260410)

[94] High reserve rates decrease the carrier's business risk and should, ceteris paribus, reduce the cost of equity.

Table 1 -- Total Plant in Service, Retirements and Depreciation

	Beginning of Year	End of Year	Average	Retirements	Annual Dep.	Beginning of Year Dep. Reserves	Retirement Percentage	Dep. Rate	Reserves as a Percent of TPIS
	A	B	C= (A+B)/2	D	E	F	G=D/A	H=E/C	I=F/A
1992	226.5	232.8	229.7	11.5	15.7	86.9	5.1	6.8	38.4
1993	235.0	242.5	238.8	10.7	16.7	92.2	4.5	7.0	39.2
1994	243.9	251.5	247.7	10.5	17.7	99.8	4.3	7.1	40.9
1995	252.1	261.8	257.0	8.9	18.4	107.8	3.5	7.2	42.8
1996	262.7	274.5	268.6	9.8	19.5	118.3	3.7	7.2	45.0
1997	274.4	286.0	280.2	11.0	20.0	129.0	4.0	7.1	47.0
1998	286.0	300.1	293.1	9.0	20.9	139.2	3.1	7.1	48.7
1999	300.1	314.6	307.4	11.3	21.5	151.9	3.8	7.0	50.6
2000	314.6	332.5	323.5	13.3	22.4	163.7	4.2	6.9	52.0
2001	332.5	355.2	343.9	8.9	23.7	175.6	2.7	6.9	52.8
2002	312.5	320.9	316.7	11.4	21.4	169.8	3.7	6.7	54.3
Avg.							3.9	7.0	

Source: ARMIS 43-02, Table B-1.B Balance Sheet Accounts (Plant Accounts)
Table B-6 Summary of Investment and Accumulated Depreciation
Columns A-F in Billions

106. The fact that the depreciation rates are higher than retirement rates means that the depreciation rates have not been set to recover only the historical equipment mortality. While the depreciation rate making process includes a historical analysis, the historical analysis is only one part of that process. Moreover, forward-looking forecasting techniques depend on the historical analysis as a partial guide to the future. The depreciation rate making process also includes "a detailed analysis of each carrier's most recent retirement patterns, the carriers plans, and the current technological developments and trends".[95] Therefore, the authorized Commission depreciation rates (the rates that are reflected in the overall carrier rate reported in Table 1), are no longer developed according to the traditional method, where "estimating depreciation lives is to examine data for older vintages and assume that all vintages will experience the same age-dependent characteristics."[96]

107. Rather, the authorized Commission depreciation rates are forward-looking in that they consider carrier plans and the current technological developments. While these rates have not been updated since 1999, carriers have the right to petition the Commission to revise the rates.[97] For example, in April and May 2000, Verizon Communications petitioned the Commission to revise the depreciation rates for Verizon Hawaii and Verizon Northwest. After a review by a three-way meeting, the Commission adopted Verizon's proposed rates.[98] This example confirms that when carriers can make a case for changes in depreciation rates, the Commission and the state commissions are willing to investigate the carriers' request, and in this instance, adopted the carrier's proposal.

108. Moreover, the Wireline Competition Bureau has recently reviewed the Commission-authorized depreciation rates and found that they are forward-looking. The Bureau states that "the Commission has used forward-looking assets for some time in its regulation of incumbent LEC depreciation practices, and the asset lives that we adopt here are the most recent ones prescribed by the Commission."[99] In fact, since 1980, the Commission "departed from its previous practice of relying largely on

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[95] In the Matter of Simplification of the Depreciation Prescription Process, CC Docket No. 92-296, Third Report and Order, May 4, 1995, FCC 95-181, ¶ 6.

[96] Vanston, Lawrence K, and Ray L. Hodges, "Depreciation Lives for Telecommunications Equipment: Review and Update", Technology Futures, Inc., 1995, Page 7.

[97] In the Matter of 1998 Biennial Review – Review of Depreciation Requirements for Incumbent Local Exchange Carriers, CC Docket No. 98-137, Report and Order, Dec 30, 1999, FCC 99-307, (Depreciation Update).

[98] In the Matter of the Prescription of Revised Percentages of Depreciation Pursuant to the Communications Act of 1934, as Amended for Verizon Hawaii, Incorporated and Verizon Northwest, Incorporated, ASD 00-36, Memorandum Opinion and Order, FCC 00-306, August 24, 2000.

[99] Virginia Arbitration Order, ¶ 115.

historical experience to project equipment lives and began to rely on analysis of company plans, technological developments, and other future-oriented studies."[100]

7.1.3 GAPP Should Not Be Substituted For The Commission Authorized Depreciation Lives

109. The major alternative to using the Commission-authorized rates is to use the carriers' financial reporting lives based on Generally Accepted Accounting Principles (GAAP). There is no reason to believe that GAAP lives are based on or related to economic lives. The purpose of GAAP is to protect the interest of investors. As the Commission stated, "GAAP is guided by the conservatism principle that holds, for example, that when alternative expense amounts are acceptable, the alternative having the least favorable effect on net income should be used."[101] When the Commission reviewed the depreciation process again, it again rejected the use of GAAP. The Commission stated that "we believe that giving incumbent LECs the right to select, for regulatory purposes, any depreciation rate allowed by GAAP is inappropriate as long as incumbent LECs reserve the right to make claims for regulatory relief based on increased depreciation that would result from granting them that flexibility."[102]

110. Recently the Bureau reviewed and rejected the use of GAAP lives for the purposes of determining UNE rates. The Bureau stated "we find that Verizon has not demonstrated that financial book lives are a more appropriate measure of the actual economic lives of an asset. Verizon did not document or explain in significant detail the methodologies, studies, or data that it, or its auditor, relied on in developing asset lives, nor did it demonstrate that these lives are in fact compliant with GAAP."[103] Without appropriate studies, it is not reasonable to conclude that a particular set of GAAP lives should be used to determine economic depreciation rates. However, if the carriers provide the appropriate studies to the state commissions, or in the alternative at a four-way meeting, then it would be possible to determine if the GAAP lives should be used. At that meeting, the state commissions would also receive other information regarding the economic lives of the equipment. With a complete record before it, each state commission would be in position to determine the most reasonable set of asset lives.

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[100] Depreciation Update, ¶ 5.

[101] In the Matter of Simplification of the Depreciation Prescription Process, CC Docket No. 92-296, Report and Order, FCC 93-452, Oct 20, 1993, ¶46.

[102] In the Matter of United States Telephone Association's Petition for Forbearance from Depreciation Regulation of Price Cap Local Exchange Carriers, ASD 98-91, FCC 99-397, Dec 30, 1999, ¶ 48.

[103] Virginia Arbitration Order, ¶116.

111. State commissions have also had trouble verifying that GAAP depreciation rates are economic depreciation rates. For example, in rejecting the Ameritech-Illinois financial depreciation rates, the Illinois Commission stated:

> The specifics of the Company's proposal are not supported by a sufficient quantum of evidence. Although it asserts that service lives must be shortened in order to ensure that they are consistent with the new competitive environment, it provided very little hard evidence justifying either the range prepared by Mr. Marsh or the actual depreciation economic lives Mr. Palmer selected. For example, Ameritech Illinois proposes an economic life of 30 years for poles, which is down from 39 years in current LRSIC studies. It provides no explanation for this change that we can evaluate. Have there been exciting new developments in telephone pole [footnote omitted] technology? Does it expect its poles to break under the weight of its competitors' attachments?
>
> We think it is reasonable to expect that if the new competitive environment is truly creating changes in the economic lives of the Company's plant assets it would be reflected in its own internal operations. [footnote omitted] For example, if the economic life of a digital switch is now seven years instead of the eighteen years approved for LRSIC studies, then Ameritech should be able to show a dramatically accelerated replacement schedule for those switches consistent with the new economic life. It did not. If new entrants are demanding state of the art functionalities, then Ameritech should be able to show examples, and demonstrate the effects and time frames involved. It did not.[104]

112. It has also been claimed that the Commission authorized lives should not be used because those lives do not account for periodic avalanches of plant retirements. An avalanche would occur when an old technology suddenly becomes stale and all vintages of the technology must be replaced.[105] A documented avalanche in telephone equipment occurred in the early 1980's when electro-mechanical switches were replaced by stored program control switches.[106] The avalanche occurred because the electromechanical switches could not provide 1-plus long distance service or custom calling features.

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[104] Illinois Commerce Commission On Its Own Motion, Investigation Into Forward Looking Cost Studies And Rates Of Ameritech Illinois For Interconnection, Network Elements, Transport And Termination Of Traffic.; Illinois Bell Telephone Company, Proposed Rates, Terms And Conditions For Unbundled Network Elements, 96-0486 Consolidated 96-0569,*1998 Ill. PUC LEXIS 109*, February 17, 1998, Pages 16-17.

[105] Vanston and Hodges, Page 7.

[106] Bergh, A.A, et. al., "Technological and Market Obsolescence of Telephone Network Equipment", Science and Technology Series, Bell Communications Research, ST-Bell-000029, 1986, Figures 42-47.

113. There have been other projections of avalanches, but there is little evidence that these avalanches have occurred. For example, it was projected that by 2006, 100 percent of the distribution loops in the District of Columbia would be fiber, and that 42.4 percent of nation's loops would be fiber by 2003.[107] These claims are hard to verify because there is no consistent definition of the meaning of fiber distribution loops. For example, if "fiber loops" means "fiber to the home", then these claims are false because, as the TRO notes, the "BOCs have deployed FTTH loops to only 400 homes.[108] The Vanston-Hodges study defines fiber in the loop "to refer to any architecture that extends fiber to an areas of no more than several hundred customers; the last link to the customer may be on copper pairs, coaxial cable, fiber or wireless."[109] The definition appears to exclude fiber/ copper loops that use standard DLC equipment.[110]

114. Information that may partially verify this forecast has recently been collected by the Commission. For example, ARMIS report 43-07 row 486 collects data for the number of switched access lines served from fiber to metallic interface locations, and row 120 collects the total number of switched lines. The ratio of row 486 lines to row 120 lines represent the percentage of lines served using fiber cable. However, the fiber cable could be in the feeder and not part of the distribution system. Thus, this ratio is more generous in its use of the word fiber than the Vanston-Hodges definition. In the year 2002, Qwest reported 1,592,872 lines in row 486 and 15,682,208 in row 120, for a ratio of approximately 10 percent, dramatically less than the Vanston-Hodges estimate of 42.4 percent.[111] Therefore, to date, there is no evidence of an avalanche away from copper toward fiber.

7.1.4 The Impact Of The Triennial Review Order On Depreciation Rates

115. Even if an avalanche had recently occurred or will occur in the near future, there is no reason to decrease the asset lives of copper plant used in TELRIC models because the TRO has eliminated the UNE associated with the need for fiber cable. In particular, the TRO "declines to attach unbundling requirements to the next-generation network capabilities of fiber based loop …we do not require incumbent LECs to provide

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[107] For the District of Columbia forecast, see The Chesapeake and Potomac Telephone Company Depreciation Represcription Narrative, 1992, Page 3; for the national forecast, see Vanston and Hodges, Page 32. The proprietary section of the Chesapeake and Potomac narrative contains projections of the fiber percentages for other years.

[108] TRO, Footnote 809.

[109] Vanston and Hodges, Page 19.

[110] Id., Page 18.

[111] Information for BellSouth, SBC and Verizon is not available because these carriers filed the ARMIS 43-07,row 486 data under proprietary seal.

unbundled access to new FTTH loops for either narrowband or broadband services."[112] Thus, the service lives used to determine the TELRIC cost of narrowband services should be determined without reference to a potential massive move towards fiber systems.

7.2 The Commission Should Rely On The States To Establish Cost Of Capital Parameters Within The General Guidelines That It Has Prescribed -- The Commission Should Not Determine A "One Size Fits All" Cost Of Capital

116. The NPRM asks a series of questions regarding the cost of capital. For example, the Commission sought comment regarding the impact of facility-based competition on the cost of capital, can the Commission simplify the task of setting the cost of capital, should there be different costs of capital for different services, and what particular models should be used for setting the cost of capital.[113] Prior to the NPRM, the Commission's general guidelines on cost of capital had been established in the Local Competition and the Triennial Review Orders. First, the Commission determined that the reasonable return should be equal to the normal return earned by a typical firm in the industry and should not be equal a supernormal return earned by any individual firm.[114] Second, the Commission held that the starting point for determining the cost of capital is the current authorized rate of return.

117. The Commission also stated that "the incumbent LECs bear the burden of demonstrating with specificity that the business risks that they face in providing unbundled network elements and interconnection services would justify a different risk-adjusted cost of capital or depreciation rate."[115] The Commission went on to state that " a state may adjust the cost of capital if a party demonstrates that either a higher or lower level of cost of capital is warranted, with the [state] commission conducting a 'rate of return or other rate based proceeding."[116] Third, the Commission clarified that a "TELRIC-based cost of capital should reflect the risks of a competitive market". This market would include all facilities-based carriers and it would be possible for the ILEC to lose customers to the alternative carriers.[117] More recently, the Commission clarified "that a TELRIC-based cost of capital should reflect any unique risks (above and beyond the competitive risks discussed above) associated with new services that might be provided over certain type of facilities". Accordingly, it could be possible to establish

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[112] TRO, ¶¶ 272 and 275.

[113] NPRM, Paragraphs 82-91.

[114] Local Competition Order, ¶699.

[115] Id.,¶ 702.

[116] Id.

[117] Triennial Review Order, ¶680

different cost of capital for different services.[118] Finally, the Commission noted that basing UNE prices on too low a cost of capital would discourage competitive LEC investment.[119]

118. We agree that too low a cost of capital built into UNE rates would discourage competitive LEC investment. We, however, note that too high a cost of capital would discourage competition because excessive UNE rates would make UNE-based CLEC business less likely. Discouraging UNE-based competition also has the potential to reduce facility-based entry because it raises the cost of entry to competitors who might use a combination of their own facilities and UNEs.

119. When states first determined UNE rates, many of them adopted the 11.25 percent Commission-authorized rate for cost of capital, accepting that rate as the best rate rather than as a starting point for determining the best rate.[120] Since then several states have adopted lower costs of capital and these lower capital costs are associated with reductions in UNE rates.[121]

120. Reductions in the cost of capital from the 11.25 percent starting point should be expected given the changes in the capital market variables since the time that the 11.25 percent was authorized. At the time that 11.25 return was authorized, the short-term interest rate was 8.0 percent and the long-term interest rate was 8.4 percent.[122] The Virginia Arbitration Order utilized a short-term interest rate of 4.93 percent and a long-term interest rate of 6.26 percent.[123] Currently, the short-term interest rate is 0.97 percent and the long-term interest rate is 5.07 percent.[124]

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[118] Id.,¶683.

[119] Id., ¶682.

[120] For example. Alabama Public Service Commission, In the Matter of Generic Proceedings: Consideration of TELRIC Studies, Docket No. 26029, released August 28, 1998 at Pages 27-29.

[121] New Jersey originally adopted an 8.8% cost of capital. NJ Board of Public Utilities, In the Matter of the Board's Review of Unbundled Network Element Rates, Terms and Conditions of Bell Atlantic- New Jersey, Inc., Docket No. TO00060356, Decision and Order, Pages 38-40, November 21, 2001.

[122] Represcribing the Authorized Rate of Return for Interstate Services of Local Exchange Carriers, CC Docket No. 89-624, Order, 5 FCC Rcd 7507, Adopted September 19, 1990, (Rate of Return Order) ¶170.

[123] Memorandum Opinion and Order, In the Matter of Petition of WorldCom, Inc. Pursuant to Section 252(e)(5) of the Communications Act for Preemption of the Virginia State Corporation Commission Regarding Interconnection Disputes with Verizon Virginia Inc. and for Expedited Arbitration, CC Docket No. 00-218, DA 03-2738, released Aug. 29, 2003, (Virginia Arbitration Order), ¶ 77.

[124] The short-term rate shown in the Rate of Return Order was for a one–year security. The current one-year security rate is 1.33 percent. The short-term rate in the Verizon Arbitration Order is the 30-day bill. http://www.federalreserve.gov/releases/h15/update, November 28, 2003.

121. The interest rate reductions will have an immediate impact on the cost of equity used by any state commission that relies on CAPM or other risk premium type methods to determine the cost of equity. However, for commissions that rely on the DCF model, interest rates reduction will not have a direct impact on the cost of equity.

122. The Virginia Arbitration Order relied on a Capital Asset Pricing Model (CAPM) to determine the cost of equity. This model is a risk premium model. It determines the cost of equity as the sum of the risk free rate plus the product of the market risk premium and the company beta. The risk free rate is based on U.S. Treasury securities. In the Virginia Arbitration Order, the Commission chose to rely on two securities, the 30-day bill and the 20-year bond. The market risk premium is the average or normal difference between the return on corporate equities and the risk free rate. A standard source for this difference is the value calculated by Ibbotson Associates (See Footnote 127). The company beta measures the relative risk of holding an individual carrier's stock compared to holding stock of a standard portfolio.[125] The Virginia Arbitration Order found that it was responsible to use a beta of one. Combining the risk free rate, the market risk premium and the beta, the Virginia Arbitration Order found that the cost of equity should be 14.37 percent.[126]

123. Using the current interest rates, the method and all other values used by the Virginia Arbitration Order, the current cost of equity would be 11.80 percent.[127] This 2.57 percentage point decrease if entered into most UNE models would dramatically decrease the TELRIC cost and the UNE rates. We, however, are not advocating that the Commission adopt the 11.80 percent value as the cost of equity. Rather, by noting the time variation of interest rates, we stress the need to rely on the record that is before each state in any UNE case. State commissions adjudicate these cases based on their Section 251 and 252 responsibilities and the petitions brought to them by the parties.

The short-term rate provided in the Rate Order was the one-year security. The current one-year Treasury security rate is 1.33 percent.

[125] Beta is equal to the product of correlation between the stock and portfolio, and the ratio of the stock's standard deviation and the portfolio's standard deviation. A beta of one implies that stock and the portfolio vary in the same direction and the same magnitude. See A. Lawrence Kolbe and James A. Read, The Cost of Capital: Estimating the Rate of Return for Public Utilities, MIT Press, 1984, Pages 68-69.

[126] Virginia Arbitration Order, ¶ 99. The CAPM risk-free interest rates were for the period June 2003, Virginia Arbitration Order, footnotes 238 and 239. The Bureau acknowledged that "our decision here is based on the record before us and that applying the same methodology to current data could produce different results. To cite just one example, we note that there has been a significant decline in interest rates since this proceeding started. For example, the 20-year Treasury security yield fell from 5.65 percent in January 2001 to 4.34 percent June 2003, before rising to 4.92 percent in July 2003." Virginia Arbitration Order, Footnote 203.

[127] The 11.80 cost of equity is the average of the equity estimate based on the short-term rate, 0.97 + (1)*(9.45)=10.42, and the equity estimate based on the long-term rate, 5.07 + (1)*(8.10)=13.17. Using updated Ibbotson market risk premiums of 8.40 and 7.0, the cost of equity decreases to 10.72 percent. See Ibbotson Associates, Stocks, Bonds, Bills, and Inflation Valuation Edition 2003 Yearbook, Page 248.

Because these cases are not settled at the same time, the approved equity returns will reflect current interest rates and other market values.

124. Therefore, the state commission decisions would include the best available reasonable estimate of the forward-looking cost of equity. On the other hand if the Commission locked in the cost of equity for some period of time, then the cost of equity used by the state commissions would only include the best available reasonable estimate of the forward-looking cost of equity in the period immediately after the Commission's decision. As that order ages, more and more state decisions would be based on a cost of equity that is not a forward-looking cost.[128] Therefore, we recommend that the Commission retain its current policy of relying on state commissions to develop a record and determine the cost of capital in each individual case based on the record before the state commission.

125. Moreover, we recommend that, as a general rule, the Commission should rely on the state commissions and the record in the state dockets for determining the cost of capital. We believe this is the most prudent policy with regard to the other questions that the Commission asked in this NPRM. For example, the Commission asked "[r]egardless of our network assumptions, are there particular models for projecting cost of capital that clearly should or should not be used?"[129] Two models dominate the discussion of the cost of equity, the discounted cash flow (DCF) and the capital asset pricing model (CAPM). Cost of equity estimates based on these models have been submitted to the Commission. In the Rate of Return Order, the Commission accorded the most weight to the DCF analysis.[130] It gave no weight to the CAPM estimates.[131] However, in the Virginia Arbitration Order, the Bureau concluded that CAPM is better than the DCF model.[132] We believe that the change in weight given to the different models was based on the record before the Commission in each case.[133] Similarly in each UNE case that comes before a state commission, that state commission will examine its record and determine which model should be given the most weight in makings its determination of the cost of equity.

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[128] We note that the current authorized interstate rate of return was adopted in September 1990, see Rate of Return Order, and that the Commission in 1998 initiated a proceeding to represcribe the rate of return. However, in November 2001, the Commission terminated that proceeding. See In the Matter of Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, CC Docket No. 00-256, Second Report and Further Notice of Proposed Rulemaking, November 8, 2001, FCC 01-304, (MAG Order), ¶ 208.

[129] NPRM, ¶ 88.

[130] Rate of Return Order, ¶ 9.

[131] Id.,¶11.

[132] Virginia Arbitration Order, ¶71.

[133] Rate of Return Order, ¶¶ 61-102,139; Virginia Arbitration Order, ¶¶ 68-77.

126. The NPRM also seeks comments on when the "cost of capital is intended to reflect the risk of participating in a market with facilities-based competition, is there any reason that the cost of capital would vary among the different states, or among the different companies?"[134] We submit that the meaning of facilities-based competition is state-specific and often study area-specific within a state. It is unreasonable to assume that the extent of facilities-based competition and the number of facilities-based competitors will be the same across all areas of the country. By extent, we refer to the fact that facilities will more likely be established within the business districts of large metropolitan areas.

127. The picture of facilities-based deployment will become clearer as state commissions perform the review of mass market switches, enterprise loop and transport trigger requirements under the Triennial Review Order. Even presuming that the decision to determine the cost of equity should be based on the potential existence of facilities-based competition, the risk associated with this potential will depend on the amount of sunk costs incurred relative to the size of the market. Given that these factors that affect the risk associated with facilities-based competition vary by state, a determination of a national cost of equity, "one-size fits all," would under-estimate the risk in high risk areas and over-estimate the risk in low risk areas.[135]

128. The number of facilities-based competitors will also affect the risk associated with competition. Currently, the number CLECs varies dramatically by state. For example, there are three CLECs operating in Maine and 21 operating in New York.[136] While the current situation is not a 100 percent determinant of the long-run state of the world, it indicates that market density and revenue potential will have a significant impact on the long-run outcome. It is generally understood that as the number of competitors increases competition and risks related to competition also increase.[137] This relationship is clearly shown in the wireless industry, where as the number of franchises increased, the price has declined.[138] Therefore, the risk associated with the number of facilities-based competitors will also vary by state, again indicating that one size will not

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[134] NPRM, ¶ 88.

[135] The risk associated with facilities-based competition could vary by study area within a state. For example, the Pennsylvania Commission could find that the cost of equity for Verizon PA could be different from the cost of equity for Verizon North, or the Texas Commission could find a different return for SWB-Texas and Verizon-Texas.

[136] Industry Analysis and Technology Division, Local Competition Report, June 2003, Table 12.

[137] See in general, William Shepherd, The Economics of Industrial Organization; F.M. Scher and David Ross, Industrial Market Structure and Economic Performance.

[138] See in general the Annual CMRS Competition Reports. See in particular, the opening remarks of Thomas Sugrue that accompanied the Sixth Annual Competition Report. The charts in that presentation demonstrate that as the number of competitors increased the wireless price per minute decreased. www.wireless.fcc.gov/statements/010620cmrSurgue_slides.ppt.

fit every jurisdiction, and that state commissions can and should determine the cost of capital in their respective jurisdictions.

129. The Commission can, however, simplify the tasks of the states by maintaining enhanced ARMIS statistics related to cost of capital decision making. For instance, the Commission could require that carriers file their 43-02 balance sheets reports by study area. Currently, these reports can be filed at the corporate level. By aggregating balance sheet statistics, the carriers force state commissions and parties in state proceedings to engage in extensive data requests. Having all of the information available in ARMIS would shorten the data request process and improve the ability of commissions and parties to undertake comparisons between the different states. The ARMIS reports can be enhanced to include market data such as the market value of stocks, debt and yields to maturity of the debt.

130. The Commission is also seeking comment on whether "it is appropriate for a state commission to establish different cost of capital for different UNEs."[139] In two previous cases, the Commission has declined to approve different returns for different ILEC functions. First, in the case of the New Jersey Bell's video dial tone application, the Commission declined to set a different rate of return for this competitive service than for the overall operations of the firm -- 11.25%.[140] New Jersey Bell used and supported the use of the 11.25% return to discount future revenue and cost over a 10 year planning horizon in its justification of rates for video dial tone service.[141] The Commission also noted that "this rate [11.25%] is normally used in pricing new regulated services, such as video dialtone basic common carrier platform services, under price cap regulation."[142]

131. The Commission should follow the same reasoning in this proceeding because the Commission noted that it is difficult to set a different rate for different services in the New Jersey case.[143] It is no more appropriate now to set a higher rate for UNEs than it was in 1994, and when the states applied authorized rate of returns in the past, this was consistent with what the Commission had done in similar situations. The states were

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[139] NPRM, ¶ 89.

[140] FCC Order and Authorization 94-180, In the Matter of the Application of New Jersey Bell Telephone Company for Authority Pursuant to Section 214 of the Communications Act of 1934, as Amended, to Construct, Operate, Own, and Maintain Advanced Fiber Optic Facilities and Equipment to Provide Video Dialtone Service Within a Geographically Defined Area in Dover Township, Ocean County, New Jersey, July 18, 1994, Paragraph 35.

[141] Id., ¶ 35.

[142] Id; Open Network Architecture Tariff of Bell Operating Companies, 9 FCC recd 440, 450-51, ¶ 25 (1993).

[143] Ibid., Footnote 106.

allowed to use 11.25% despite the fact that in the video dial tone proceeding, New Jersey Bell faced two facility-based providers.[144]

132. Second, in the expanded interconnection through physical collocation proceeding, the Commission refused to approve a higher cost of capital for the provision of collocation facilities than for the interstate jurisdiction in general. It found that carriers seeking higher cost of capital failed "to make an adequate showing to justify a higher rate [and]…no LEC seeking to use a percentage cost of money in excess of 11.25 percent adequately identifies or describes the source, type and time period of the financial data, or the assumptions, and the methodologies that it uses to develop its cost of equity."[145]

133. Because the Commission has found in the past the carriers cannot support different returns or even identify methodologies that would support different returns, we recommend that the Commission refrain from moving down this speculative path. We do not know of any new information that could help the Commission determine such returns. For example, companies, in certain instances, have sold tracking stocks for a subsidiary. These types of stock might provide information that could help the Commission determine a return for part of a carrier. However, we cannot identify any LEC that has sold tracking stocks for its UNE division or for a particular UNE.

7.3 Calculating Loop Costs Using ILEC's Actual Cable Utilization Rates As Cost Model Inputs Overstates Loop Costs

134. As we stated in Paragraph 58 above, we believe that current fill rates are the proper starting point for utilization rates for a cost study.[146] Fill rates vary for a number of reasons. Some of the factors that influence utilization are household and office occupancy rates, type of network facilities deployed, rate-of-growth of the local economy, regulatory requirements to provide "warm" dial-tone, the accuracy of demand forecasts, and the construction standard of the ILEC (e.g., two, three, or more distribution pairs per household).

135. Prior to using the current or actual utilization rates, it is important to understand how the rates have been calculated and how they are used in forward-looking models. First, it is our understanding that most telephone carriers maintain utilization records at the main distribution frame in the central office. They do not routinely measure the fill

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[144] Ibid., Paragraph 40.

[145] In the Matter of Local Exchange Carriers' Rates, Terms, and Conditions for Expanded Interconnection Through Physical Collocation for Special Access and Switched Transport, CC Docket No. 93-162, Second Report and Order, June 13, 1997, FCC 97-208, ¶ 74.

[146] We recommend that there be a presumption that the actual utilization rates are reasonable input values.

rates at the distribution level. Therefore, prior to using any current utilization rates advocated by a carrier, the carrier must provide the state commission with a statistically sound estimate of the distribution utilization rate. In determining whether the utilization rate is sound, the carrier must sample a sufficient number of distribution cables within its study area. The sample must be stratified such that it provides statistically significant results for all wire centers and density zones.

136. Second, current utilization rates can only be used to judge the reasonableness of the model outputs. The current or actual utilization rates should never be used as cost model inputs because it results in the overstatement of loop cost estimates. To illustrate our point it is necessary to explain the difference between a fill factor when it is used as an input to a cost model and the fill factor that results from the action of the model. This difference is caused by the fact that cables can only be purchased in certain fixed sizes. Consider the following examples. For both examples we will assume that a) cables can only be purchased in sizes of 100, 200 and 300 pairs; b) the carrier's actual fill rate is 75 percent; and c) the cost model is estimating a firm's attempt to build two cables, one with demand of 140 pairs and the other with a demand of 160 pairs.

137. In scenario A, we assume that the cost model employs an input fill factor of 80 percent. Based on our assumptions the cost model will direct us to purchase one cable with 175 pairs (140/.80) and a second cable with 200 pairs (160/.80). However, because we cannot purchase a 175 pair cable, the model assumes that we purchase the next largest cable; which is 200 pairs. Based on these calculations the model run for scenario A estimates the cost of investing in two 200 pair cables, and the output fill factor it calculates is 300 (the sum of 140 plus 160 pairs of demand) divided by 400 (the sum of the total pairs provided by two 200 pair cables), or 75 percent.

138. In Scenario B, we assume that the cost model employs an input fill factor of 75 percent. Based on these assumptions our cost model will direct us to purchase one cable with 187 pairs (140/.75) and a second cable with 213 pairs (160/.75). Again, because we cannot purchase a 187 pair cable, the model assumes that we invest in a 200 pair cable. However, for the second cable, 200 pairs are no longer sufficient so we must purchase the next largest cable; which is 300 pairs. Based on these calculations the model run for scenario B estimates the cost of investing in one 200 pair cable and one 300 pair cable. The output fill factor calculated by model run B is 300 (the sum of 140 plus 160 pairs of demand) divided by 500 (the sum of the total pairs provided by one 200 pair cable and one 300 pair cable), or 60 percent.

139. As the examples above illustrate, because cables can only be purchased in certain sizes, using a carrier's actual cable utilization rates as cost model inputs will result in output utilization rates calculated by the model that are below actual levels. To correct this problem, cable utilization rates that are inputs to the cost model should be adjusted so that the resulting utilization rate calculated by the model is at least as high as the ILECs actual cable utilization rates.

7.4 The Commission Should Encourage the Use of Geo-Coding of Customer Locations

140. The use of geo-coded customer locations will enable the TELRIC models to more accurately reflect the cost of the efficient entrant, and match the goal of establishing costs associated with the results of the competitive market. Using geo-coded location data ensures that the model design accurately reflects the design of an efficient network that a carrier could design. Such a design includes a sufficient amount of cable and terminals required to serve the entire customer base. Designs based on typical neighborhoods, such as grid designs, could under- or over-invest in cable and terminals depending on whether geo-coded locations were less or more dispersed than the grid.

141. We note that the Commission earlier concluded "that a model is most likely to select the least-cost, most-efficient outside plant design if it uses the most accurate data for locating customers within wire centers, and that the most accurate data for locating customers within wire centers are precise latitude and longitude coordinates for those customers' locations."[147] The Commission did not adopt the use of geo-codes in the universal service model because it could not find a source of actual geo-coded data that was available for public review.[148] However, the Commission's desire to use geo-coded data has been the catalyst for actions at the state level.

142. States are encouraging the companies to use geo-coded data. Arizona and Washington are both good examples of states compelling the provision of better customer location data.[149]

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[147] In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Fifth Report and Order, FCC 98-279, October 28, 1998, ¶ 33.

[148] In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Tenth Report and Order, FCC 99-304, November 2, 1999, ¶ 36.

[149] Before the Washington State Utilities and Transportation Commission In the Matter of the Review of: Unbundled Loop and Switching Rates; the Deaveraged Zone Rate Structure; and Unbundled Network Elements, Transport, and Termination, Docket No. UT-023003, Twelfth Supplemental Order: Granting Motion To Compel; Revising Schedule; and Bifurcating Proceeding, Before the Washington State Utilities and Transportation Commission In the Matter of the Review of Unbundled Loop and Switching Rates; the Deaveraged Zone Rate Structure, and Unbundled Network Elements, Transport, and Termination (Non recurring Costs), Docket No. UT-033034, Order No. 01, August 5, 2003.

Before the Washington State Utilities and Transportation Commission In the Matter of the Review of Unbundled Loop and Switching Rates and Review of the Deaveraged Zone Rate Structure, Qwest's Answer to AT&T's Motion to Compel Discovery, Docket No. UT-023003, July 23, 2003.

http://www.wutc.wa.gov/rms2.nsf/0/C9EEE0638DD7542F88256D6C007EB871/$file/Answer+to+ATT+motion+to+compel.doc

143. Carriers are also adopting geo-coding because they believe that geo-coding provides a more accurately underpinning for the models than the techniques previously used. For example, the following appears in Florida proceedings on the pricing of UNEs:

> In previous filings BellSouth's loop studies were based on a loop sample, whereby detailed characteristics of a sample of loops drawn from the company's service territory were determined and the forward-looking cost of this sample calculated. BellSouth witness Caldwell notes that there were certain limitations with this approach -- most importantly, that . . . the original sample was statistically valid only for the services tested, i.e., only for single line residential and single line business loops and only on a statewide average basis. Any attempt to stratify the sample into geographic areas for geographic deaveraging could not be statistically supported. In addition, conducting loop sampling was extremely labor-intensive and time-consuming.[150]

144. In Florida, BellSouth introduced a new model that incorporates BellSouth's geo-coded data, including all customer points, wire center locations, and wire center boundaries. The model also puts cables along roads and therefore deals with obstacles. The model was used by the Florida Public Service Commission to set UNE rates, and illustrates our point concerning how studies used to be done -- and should prompt the Commission to continue to allow states to refine the process of determining the forward-looking UNE costs.

145. More recently, Sprint in Nevada and Verizon in California have introduced models based on geo-coding.[151] This trend indicates that carriers have become more familiar with geo-coded data and are capable of merging that data into their TELRIC models. However, we realize that some carriers might not be able to use geo-coded data immediately. For those carriers that are currently not using geo-coded data, we recommend that their current models be grandfathered through December 31, 2005, unless a state commission requires geo-coded data prior to that time. After that date, we recommend that all TELRIC models be required to use geo-coded data.

7.5 Structure Sharing

146. Paragraphs 47, 48, 71, and 72 of the NPRM suggest that the structure sharing percentages adopted by some states are backward looking, not reflective of real world conditions, and that the states' decision were based on an incorrect interpretation of the

[150] Before the Florida Public Service Commission In Re: Investigation into Pricing of Unbundled Network Elements. Docket No. 990649-TP, Order No. PSC-01-1181-FOF-TP, May 25, 2001, Pages 136-137.

[151] The Sprint model was filed on December 23, 2002 in NV PUC Docket No. 00-7012;The Verizon model was filed on November 3, 2003 in CA PUC Docket No. R93-04-003/I.93-04-002.

Universal Service Order. While we agree that these specific inputs should not be indiscriminately employed as a one size fits all solution in UNE cost proceedings, we nonetheless feel that the Commission's characterization of these inputs is incorrect.

147. The foundation of the USF structure sharing percentages was a UNE cost proceeding in Washington, not a USF proceeding where only relative cost differences were being estimated.[152] In addition, in the aforementioned UNE cost docket the Washington commission noted that the structure sharing values it adopted did not consistently fall below or above the recommendations of the ILECs. Furthermore, in the federal USF proceeding SBC explicitly stated that that the structure sharing percentages ultimately adopted by the Commission reflected its current practices.[153] Thus, we feel the claims that these inputs are not reflective of real world conditions, are inherently backward looking, or are otherwise invalid when calculating the cost of UNEs, are misplaced.

148. Although some parties argue that going forward in a TELRIC environment their will be few if any opportunities for ILECs to share the cost of placing underground and buried facilities the record before the Washington commission did not support this conclusion. For example, an ILEC witness testified that outside of the downtown core area, the placement cost of underground conduit is in fact shared with other utilities, and, when a total rebuild occurs in a developed area (as contemplated by TELRIC) the likelihood of a joint undertaking with another utility increases significantly because city officials encourage utilities to coordinate their work in developed areas to eliminate the disruptive effects.[154]

149. Similarly, although U S West's proposal originally emphasized the need to take into account existing obstacles such as sidewalks, driveways, and gardens, by assuming that as much as 50% of buried cable would be installed by boring, the Washington commission ultimately rejected this assumption because "a manager of US West's field engineering operations ….testifie[d] that the Company employs bore cable, as opposed to burying or plowing, for approximately one percent of the buried plant installations in Washington."[155] Moreover, the Washington commission also noted that U S West's assumptions were unrealistic because they contemplated existing structures like sidewalks where they increased costs but ignored existing structures, such as conduit beneath streets, and electric utility poles where they would reduce the cost of

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[152] See USF Inputs Order at Paragraph 246, citing WUTC Docket No. UT 960369, 8th Supplemental Order, Paragraphs 73-76. The Washington Utility and Transport Commission's decision largely reflected the recommendations made by its Staff. Two staff engineers and a Staff economist developed the input values.

[153] See USF Inputs Order at Paragraph 244.

[154] See 8th Supplemental Order at Paragraph 57

[155] Qwest initial forward-looking assumption was 50%. See 8th Supplemental Order at Paragraph 53.

installing facilities.[156] The New Mexico commission also reached the same conclusion.[157]

150. The state records noted above show that the state decision reflect actual real-world sharing opportunities. Therefore, it is inappropriate for the Commission to assume that cost sharing opportunities more abundant than those proffered by ILECs and placement activities assumptions that allow for low cost construction must be the result of state commissions taking the Commission's statements out of context and assuming away the attributes of the real world.

7.6 The Commission Should Not Support Undertaking Cost Studies That Rely Solely On Data In The Public Domain

151. While we support the Commission's emphasis on transparency, as demonstrated in Paragraph 41 of the NPRM, we do not think it is possible to develop sensible cost studies based exclusively on data that is in the public domain. Most of the available public domain data are reported in ARMIS. The ARMIS reporting systems were developed to help the Commission determine access prices and track jurisdictional separations issues. The ARMIS reporting systems were not built to function as the data input source for forward-looking cost models.

152. The two prime examples of this phenomenon are associated with the split between retail and wholesale expenses, and the split between copper and fiber expenses. The cost of UNEs is defined to include only wholesale expenses, excluding all retail related expenses. However, in the 43-03 Joint Cost reports, Marketing (Account 6610) and Customer Services (Account 6620) are not divided between wholesale and retail activities.[158] Therefore, it is necessary to use non-public domain information to eliminate retail expenses.

153. Second, the 43-03 reports provide cable maintenance expenses by type of cable such as aerial, buried and underground, but do not separate expenses by whether the cable is copper or fiber. In addition, cable investments are not divided between copper and fiber investments. This implies that expense to investment ratios derived from ARMIS must reflect the total cable investment and cannot be used to construct expense to investment ratios based only on fiber or only on copper. Moreover, it is generally accepted that fiber maintenance is less than copper maintenance, and that the percent of cable that is fiber will be higher in a forward-looking environment than in the current

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[156] See 8th Supplemental Order, Paragraphs 45-48.

[157] New Mexico Public Regulation Commission Findings Of Fact, Conclusions Of Law And Order - 96-310-TC; 96-334-TC, Paragraphs 125-126.

[158] The exclusion of retail expenses associated with Corporate Operations and General Support expenses will also depend on the use of non-public domain data.

environment. This implies that the use of ARMIS total cable ratios will generate excessive cable expenses.[159]

154. In addition, because of the separation freeze, reported public domain statistics no longer track actual investments and expenses. The freeze requires that "all separations categories and subcategories shall be frozen at their calendar year 2000 percentage ratios".[160] This means that if sub-categories 4.1, 4.2, and 4.3 in Account 2230 Circuit Equipment contained 40 percent, 40 percent and 20 percent of the investment respectively in 2000, then the subcategories would still contain the same percentages of the investment in circuit equipment in 2003. However, if digital loop carrier equipment (DLC) was a relative fast growing investment during the period, then the reported 4.1 investment would be less than the actual 4.1 investment.

155. The separation freeze can also have an impact on switching costs if dial equipment minutes (DEMs) are used an input. DEMs are used in separations studies to jurisdictional separate the local circuit switch. However, in certain models, DEMs can affect the demand for trunking and therefore, trunking related costs are used to determine the relative amount of minutes that remain with an office compared to the minutes that are transmitted using interoffice trunks. In those models, the separation freeze will distort the relative cost of intra-office and interoffice calls.

156. The difference between reported and actual investments affects the ability of the Commission to develop "an approach that bases UNE prices on a cost inquiry that is more firmly rooted in the real-world attributes of the existing network".[161] In order to determine such UNE prices, it is first necessary to unfreeze the categories and perform new basic separations studies. Without these studies, carriers do not know what are the real-attributes of the existing networks.

8 The Commission Should Allow States To Develop UNE Rates That Reflect Its Findings In The Triennial Review

157. In the TRO, the Commission made a number of major changes to the required list of unbundled elements. First, the high frequency portion of the loop provided over

[159] For example, if the current cable investment is $100 and expenses are $22 then the expense factor would be 22 percent. However, if the $100 investment was the sum of $80 of copper investment and $20 of fiber investment, and the copper expenses were $20 and the fiber expenses were $2, then copper expense factor would be 25 percent and the fiber expense factor 10 percent. If the forward-looking investment is $100 of which $60 is copper and $40 is fiber, then applying the total account factor, forward-looking expenses will be $22. However, applying the copper and fiber expense factors separately, forward-looking expenses decrease to $19.

[160] In the Matter of Jurisdictional Separations and Referral to the Federal-State Joint Board, CC Docket No. 80-286, Report and Order, May 22, 2001, FCC 01-162, ¶ 22.

[161] NPRM, ¶ 4.

fiber systems no longer has to be offered on an unbundled basis. Second, circuit switching no longer has to be offered in the combination known as UNE-P for certain markets.[162] We recommend that the states take appropriate action to change UNE rates with respect to the general guidelines established in the TRO.

8.1 State Commissions Should Reduce UNE Rates Associated With Mass Market Fiber Hybrid Loops Because The Commission Declined To Attach Unbundling Requirements To The Next-Generation Network Capabilities Of Fiber Based Loop

158. With regard to Paragraph 43 of the NPRM, state commissions should adjust UNE rates associated with mass-market fiber hybrid loops because failure to do so would require non-competitive services to subsidize competitive services. Section 254(k) of the Communications Act requires state commissions to prevent such subsidies.[163]

159. The competitive service receiving the subsidy are the services provided over the high-frequency portion of the loop. The USTA court relying extensively on Commission documents found that there is intermodal competition for high frequency portion of the loop. For example, the court stated "[t]he first 706 report found that "[n]umerous companies in virtually all segments of the communications industry are starting to deploy, or plan to deploy in the near future broadband to the consumer market, including cable television companies, incumbent LECs, some utilities, and 'wireless cable' companies."[164] Because such competition exists, DC Circuit vacated the Commission's line sharing order.

160. In addition, the Commission has recognized that "cable modem service is the most widely used means by which the mass market obtains broadband services." It also noted that "the gap between cable modem and ADSL subscribership continues to widen."[165] Thus, both the Court and the Commission have found that ADSL services provided over the high frequency portion of the loop are competitive services.

161. The lease of the low frequency portion of the loop through the purchase of a UNE, however, is a non-competitive service. The Commission stated that "with respect to our mass market analysis, we make a national impairment determination for loops

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[162] BOCs will still have to provide switching according to their Section 271 obligations, TRO paragraphs 653-655.

[163] 47 U.S.C. 254(k) reads in part "a telecommunications carrier may not use service that are not competitive to subsidize services that are subject to competition."

[164] United State Telecom Association v. FCC, DC Circuit, No. 00-1012, decided May 24, 2002.

[165] TRO, ¶ 262.

based on general economic and operational factors that do vary significantly by geographic area."[166]

162. The Commission also noted that "the record indicates that deployment of alternative local loop facilities for the purposes of providing telecommunications services to the mass market has been minimal."[167] Thus, the Commission recognizes that the mass-market UNE loop is a non-competitive service.

163. Many UNE rates, however, are based on cost studies that include the entire cost of the hybrid fiber loop.[168] In those instances, the UNE rate includes the cost of the high and low frequency portion of the loop. Now that the high frequency portion of the loop will no longer be made available for use by the CLECs, it becomes necessary, according to §254(k), to allocate the fiber hybrid loops among the different services, and reduce the UNE loop price accordingly.

164. Moreover, even if § 254(k) did not exist, it would still be necessary to reduce the UNE loop price based on general cost causation principles. Those principles hold that the cost-causer should pay for the cost caused. The cause of providing loops that provide both high and low frequency service is the desire to provide the next-generation high frequency services. These costs should be removed from the cost of the low-frequency UNE.

165. At this time, we do not recommend that the Commission should determine what percent of the UNE cost that is shard by the low and high frequency portions of the loop should be assigned to the high frequency portion of the loop. Rather, we recommend, first, that there should be direct assignment of costs between to the different portions of the loop whenever possible. For example, the line cards could be directly assigned to xDSL and voice grade services. Second, we recommend that the state commissions determine that percentage as part of their general responsibilities to determine the UNE rates, and as part of their responsibility under § 254(k) to ensure that state UNE rates do not include a subsidy.

8.2 The Commission Should Not Change The Calculation Of The Switching Element For Switches Serving Both Enterprise And Mass Market Customers

[166] Id., ¶ 198.

[167] Id.,¶ 222.

[168] We recognize that with fiber, there is not a high and low frequency bandwidth. Nevertheless, we use these terms in this section in order to be consistent with the practice of referring to voice and data as low and high frequency services, respectively. We also recognize that the term high-frequency portion of the loop refers only to the copper section of the loop and not the fiber section. We continue to use the convention high-frequency portion of the loop in discussing data transmitted over fiber that had arrived at the DLC over the high-frequency portion of the copper loop in order to avoid confusion that might result from changing nomenclature in the middle of a proceeding.

166. Paragraph 44 of the NPRM asks parties to address the pricing implications of the Commission's finding that switching will no longer be available as a UNE to enterprise customers. We do not believe that the costing of the switch should change because the price of the UNE should reflect the economies of scale that are achieved by sharing the facility between the enterprise and mass market.

167. If we assume that there is a switch that only serves enterprise customers, and a finding has been made that the switching UNE is no longer available to enterprise customers, then this switch should be entirely excluded from the development of UNE switching rates. Second, if a switch, or some other facility, is used by both mass market and enterprise customers, the cost of using the switch should be based on the total cost of using the facility divided by the total demand (mass market + enterprise customers). The intention of the Act is to offer UNEs at a rate equal to the economic cost of providing the UNE. The per unit economic cost should reflect the economies of scale achieved by the ILEC.

168. This is no different than when the ILECs built a network that would be used for broadband and narrowband facilities. State commissions found that the shared cost of the platform should be shared by both broadband and narrowband services. It did not matter that broadband services were not regulated -- since the facility was being shared, the relevant unit cost was developed based upon a consideration of total demand.

9 Concluding Remarks And Recommendations

169. In this affidavit, we set out to explain our understanding of how rates have been set by state commissions. In reading the NPRM, we were struck between the divergence of the Commission's perception of how prices are set and our first-hand experience. Many of the concerns raised in the NPRM are misplaced.

170. We believe that the difference between our own experiences and the Commission's perception of the process as expressed in the NPRM is a natural outgrowth of how the Commission works. Parties that can afford a presence in Washington visit the Staff and Commissioners on a regular basis. The states, as well as consumer groups, can only afford an occasional visit to the Commission. Furthermore, in light of the Commission's heavy workload, it does not have the opportunity to observe a state TELRIC pricing proceeding from start to finish.

171. The NPRM states, at Paragraph 9, that "We are particularly interested in the perspective of the state commissions on the successes and failures of our current rules, and the possible modifications that would most help them in fulfilling their important statutory role in setting UNE prices and resale discounts." We are encouraged by this comment and are confident that if the records of the states are carefully considered, the Commission will develop a more positive view of the current TELRIC price setting process.

STATE OF FLORIDA

COUNTY OF LEON

The undersigned, being of lawful age and duly sworn on oath, hereby certifies, deposes and stated the following:

I have caused to be prepared the attached written affidavit in support of the National Association of State Utility Consumer Advocates in the WC Docket No. 03-173. This affidavit is true and correct to the best of my knowledge, information, and belief.

Further Affiant sayeth not.

Affiant

Subscribed and sworn to before me this 1st day of December, 2003.

RAYMOND POUCHER
MY COMMISSION # DD 051528
EXPIRES: August 20, 2006
Bonded Thru Budget Notary Services

Notary Public

DL 224625316
1Mots.

STATE OF Maryland

COUNTY OF Montgomery

The undersigned, being of lawful age and duly sworn on oath, hereby certifies, deposes and stated the following:

I have caused to be prepared the attached written affidavit in support of the National Association of State Utility Consumer Advocates in the WC Docket No. 03-173. This affidavit is true and correct to the best of my knowledge, information, and belief.

Further Affiant sayeth not.

Affiant

Subscribed and sworn to before me this 10 day of December, 2003.

Notary Public

NATALIE VEST
Notary Public, State of Maryland
My Commission Expires May 2, 2007